## **Gergely Szakacs**

## List of Publications by Year in descending order

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81900 36028 9,776 122 39 97 citations h-index g-index papers 124 124 124 12626 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Targeting multidrug resistance in cancer. Nature Reviews Drug Discovery, 2006, 5, 219-234.	46.4	3,098
2	Human Multidrug Resistance ABCB and ABCG Transporters: Participation in a Chemoimmunity Defense System. Physiological Reviews, 2006, 86, 1179-1236.	28.8	637
3	Predicting drug sensitivity and resistance. Cancer Cell, 2004, 6, 129-137.	16.8	496
4	The role of ABC transporters in drug absorption, distribution, metabolism, excretion and toxicity (ADME–Tox). Drug Discovery Today, 2008, 13, 379-393.	6.4	482
5	Functional Characterization of the Human Multidrug Transporter, ABCG2, Expressed in Insect Cells. Biochemical and Biophysical Research Communications, 2001, 285, 111-117.	2.1	292
6	Functional Multidrug Resistance Protein (MRP1) Lacking the N-terminal Transmembrane Domain. Journal of Biological Chemistry, 1998, 273, 32167-32175.	3.4	283
7	MDR3 P-glycoprotein, a Phosphatidylcholine Translocase, Transports Several Cytotoxic Drugs and Directly Interacts with Drugs as Judged by Interference with Nucleotide Trapping. Journal of Biological Chemistry, 2000, 275, 23530-23539.	3.4	220
8	Interaction of nilotinib, dasatinib and bosutinib with ABCB1 and ABCG2: implications for altered antiâ€cancer effects and pharmacological properties. British Journal of Pharmacology, 2009, 158, 1153-1164.	5 <b>.</b> 4	195
9	The controversial role of ABC transporters in clinical oncology. Essays in Biochemistry, 2011, 50, 209-232.	4.7	185
10	Targeting the Achilles Heel of Multidrug-Resistant Cancer by Exploiting the Fitness Cost of Resistance. Chemical Reviews, 2014, 114, 5753-5774.	47.7	172
11	Selective Toxicity of NSC73306 in MDR1-Positive Cells as a New Strategy to Circumvent Multidrug Resistance in Cancer. Cancer Research, 2006, 66, 4808-4815.	0.9	162
12	Profiling SLCO and SLC22 genes in the NCI-60 cancer cell lines to identify drug uptake transporters. Molecular Cancer Therapeutics, 2008, 7, 3081-3091.	4.1	151
13	Synthesis, Activity, and Pharmacophore Development for Isatin-β-thiosemicarbazones with Selective Activity toward Multidrug-Resistant Cells. Journal of Medicinal Chemistry, 2009, 52, 3191-3204.	6.4	146
14	Anticancer Thiosemicarbazones: Chemical Properties, Interaction with Iron Metabolism, and Resistance Development. Antioxidants and Redox Signaling, 2019, 30, 1062-1082.	5 <b>.</b> 4	137
15	Human ABCB6 Localizes to Both the Outer Mitochondrial Membrane and the Plasma Membrane. Biochemistry, 2007, 46, 9443-9452.	2.5	117
16	Tyrosine kinase inhibitors as modulators of ATP binding cassette multidrug transporters: substrates, chemosensitizers or inducers of acquired multidrug resistance?. Expert Opinion on Drug Metabolism and Toxicology, 2011, 7, 623-642.	3.3	108
17	Identification of Compounds Selectively Killing Multidrug-Resistant Cancer Cells. Cancer Research, 2009, 69, 8293-8301.	0.9	96
18	Comparing cDNA and oligonucleotide array data: concordance of gene expression across platforms for the NCI-60 cancer cells. Genome Biology, 2003, 4, R82.	9.6	91

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19	Nucleotide Occlusion in the Human Cystic Fibrosis Transmembrane Conductance Regulator. Journal of Biological Chemistry, 1999, 274, 12209-12212.	3.4	88
20	A novel way to spread drug resistance in tumor cells: functional intercellular transfer of P-glycoprotein (ABCB1). Trends in Pharmacological Sciences, 2005, 26, 385-387.	8.7	86
21	Principal expression of two mRNA isoforms (ABCB  5αandABCB  5β) of the ATP-binding cassette transport geneABCB 5 in melanoma cells and melanocytes. Pigment Cell & Melanoma Research, 2005, 18, 102-112.	er 3.6	82
22	Shifting the Paradigm: The Putative Mitochondrial Protein ABCB6 Resides in the Lysosomes of Cells and in the Plasma Membrane of Erythrocytes. PLoS ONE, 2012, 7, e37378.	2.5	82
23	Correlation of homologous recombination deficiency induced mutational signatures with sensitivity to PARP inhibitors and cytotoxic agents. Genome Biology, 2019, 20, 240.	8.8	82
24	Analysis of ATP-Binding Cassette Transporter Expression in Drug-Selected Cell Lines by a Microarray Dedicated to Multidrug Resistance. Molecular Pharmacology, 2004, 66, 1397-1405.	2.3	79
25	Design, synthesis and biological evaluation of thiosemicarbazones, hydrazinobenzothiazoles and arylhydrazones as anticancer agents with a potential to overcome multidrug resistance. European Journal of Medicinal Chemistry, 2016, 117, 335-354.	5 <b>.</b> 5	79
26	Pegylated liposomal formulation of doxorubicin overcomes drug resistance in a genetically engineered mouse model of breast cancer. Journal of Controlled Release, 2017, 261, 287-296.	9.9	70
27	Calcein assay for multidrug resistance reliably predicts therapy response and survival rate in acute myeloid leukaemia. British Journal of Haematology, 2001, 112, 308-314.	2.5	67
28	Hepatic ABCG5 and ABCG8 Overexpression Increases Hepatobiliary Sterol Transport but Does Not Alter Aortic Atherosclerosis in Transgenic Mice. Journal of Biological Chemistry, 2004, 279, 22913-22925.	3.4	66
29	Interaction of the EGFR inhibitors gefitinib, vandetanib, pelitinib and neratinib with the ABCG2 multidrug transporter: Implications for the emergence and reversal of cancer drug resistance. Biochemical Pharmacology, 2012, 84, 260-267.	4.4	65
30	Ins and outs of the ABCG2 multidrug transporter: An update on in vitro functional assays. Advanced Drug Delivery Reviews, 2009, 61, 47-56.	13.7	57
31	Characterization of the ATPase Cycle of Human ABCA1: Implications for Its Function as a Regulator Rather Than an Active Transporter. Biochemical and Biophysical Research Communications, 2001, 288, 1258-1264.	2.1	52
32	ABCC6 Is a Basolateral Plasma Membrane Protein. Circulation Research, 2013, 112, e148-51.	<b>4.</b> 5	49
33	Discovery of a Daunorubicin Analogue That Exhibits Potent Antitumor Activity and Overcomes P-gp-Mediated Drug Resistance. Journal of Medicinal Chemistry, 2006, 49, 932-941.	6.4	48
34	Characterization of Disease-Associated Mutations in Human Transmembrane Proteins. PLoS ONE, 2016, 11, e0151760.	2.5	46
35	Diagnostics of multidrug resistance in cancer. Pathology and Oncology Research, 1998, 4, 251-257.	1.9	44
36	Interaction of ABC Multidrug Transporters with Anticancer Protein Kinase Inhibitors: Substrates and/or Inhibitors?. Current Cancer Drug Targets, 2009, 9, 252-272.	1.6	44

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37	Influence of OATPs on Hepatic Disposition of Erlotinib Measured With Positron Emission Tomography. Clinical Pharmacology and Therapeutics, 2018, 104, 139-147.	4.7	43
38	Functional expression of the 11 human Organic Anion Transporting Polypeptides in insect cells reveals that sodium fluorescein is a general OATP substrate. Biochemical Pharmacology, 2015, 98, 649-658.	4.4	42
39	A single active catalytic site is sufficient to promote transport in P-glycoprotein. Scientific Reports, 2016, 6, 24810.	3.3	42
40	Identification of novel cell-impermeant fluorescent substrates for testing the function and drug interaction of Organic Anion-Transporting Polypeptides, OATP1B1/1B3 and 2B1. Scientific Reports, 2018, 8, 2630.	3.3	42
41	Sucrose Esters Increase Drug Penetration, But Do Not Inhibit Pâ€Glycoprotein in Cacoâ€2 Intestinal Epithelial Cells. Journal of Pharmaceutical Sciences, 2014, 103, 3107-3119.	3.3	41
42	Role of glycine-534 and glycine-1179 of human multidrug resistance protein (MDR1) in drug-mediated control of ATP hydrolysis. Biochemical Journal, 2001, 356, 71-75.	3.7	40
43	Comparative solution equilibrium studies of antitumor ruthenium(η <sup>6</sup> -p-cymene) and rhodium(η <sup>5</sup> -C <sub>5</sub> Me <sub>5</sub> ) complexes of 8-hydroxyquinolines. Dalton Transactions, 2017, 46, 4382-4396.	3.3	39
44	State-dependent Inhibition of Cystic Fibrosis Transmembrane Conductance Regulator Chloride Channels by a Novel Peptide Toxin. Journal of Biological Chemistry, 2007, 282, 37545-37555.	3.4	38
45	The thiosemicarbazone Me2NNMe2 induces paraptosis by disrupting the ER thiol redox homeostasis based on protein disulfide isomerase inhibition. Cell Death and Disease, 2018, 9, 1052.	6.3	38
46	NGR-peptideâ^'drug conjugates with dual targeting properties. PLoS ONE, 2017, 12, e0178632.	2.5	38
47	Expression Levels of the ABCG2 Multidrug Transporter in Human Erythrocytes Correspond to Pharmacologically Relevant Genetic Variations. PLoS ONE, 2012, 7, e48423.	2.5	37
48	Role of the N-terminal transmembrane domain in the endo-lysosomal targeting and function of the human ABCB6 protein. Biochemical Journal, 2015, 467, 127-139.	3.7	36
49	Shotgun Lipidomic Profiling of the NCI60 Cell Line Panel Using Rapid Evaporative Ionization Mass Spectrometry. Analytical Chemistry, 2016, 88, 7507-7514.	6.5	34
50	Identification and Validation of Compounds Selectively Killing Resistant Cancer: Delineating Cell Line–Specific Effects from P-Glycoprotein–Induced Toxicity. Molecular Cancer Therapeutics, 2017, 16, 45-56.	4.1	34
51	Expression of calcium pumps is differentially regulated by histone deacetylase inhibitors and estrogen receptor alpha in breast cancer cells. BMC Cancer, 2018, 18, 1029.	2.6	34
52	Structureâ€"Activity Relationships of Chromone Derivatives toward the Mechanism of Interaction with and Inhibition of Breast Cancer Resistance Protein ABCG2. Journal of Medicinal Chemistry, 2013, 56, 9849-9860.	6.4	33
53	Impact of copper and iron binding properties on the anticancer activity of 8-hydroxyquinoline derived Mannich bases. Dalton Transactions, 2018, 47, 17032-17045.	3.3	32
54	Cell type-dependent HIF1 $\hat{l}_{\pm}$ -mediated effects of hypoxia on proliferation, migration and metastatic potential of human tumor cells. Oncotarget, 2017, 8, 44498-44510.	1.8	32

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55	Role of glycine-534 and glycine-1179 of human multidrug resistance protein (MDR1) in drug-mediated control of ATP hydrolysis. Biochemical Journal, 2001, 356, 71.	3.7	31
56	Evaluation of ABCG2 Expression in Human Embryonic Stem Cells: Crossing the Same River Twice? Â. Stem Cells, 2010, 28, 174-176.	3.2	30
57	Transition-State Formation in ATPase-Negative Mutants of Human MDR1 Protein. Biochemical and Biophysical Research Communications, 2000, 276, 1314-1319.	2.1	28
58	An inventory of lysosomal ABC transporters. FEBS Letters, 2020, 594, 3965-3985.	2.8	28
59	High Copper Complex Stability and Slow Reduction Kinetics as Key Parameters for Improved Activity, Paraptosis Induction, and Impact on Drug-Resistant Cells of Anticancer Thiosemicarbazones.  Antioxidants and Redox Signaling, 2020, 33, 395-414.	5.4	28
60	Synthesis and characterization of the anticancer and metal binding properties of novel pyrimidinylhydrazone derivatives. Journal of Inorganic Biochemistry, 2015, 144, 18-30.	3.5	25
61	Mutations of the central tyrosines of putative cholesterol recognition amino acid consensus (CRAC) sequences modify folding, activity, and sterol-sensing of the human ABCG2 multidrug transporter. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 477-487.	2.6	23
62	Relevance of multidrug resistance in the age of targeted therapy. Current Opinion in Drug Discovery & Development, 2009, 12, 246-52.	1.9	23
63	The human ABCB6 protein is the functional homologue of HMT-1 proteins mediating cadmium detoxification. Cellular and Molecular Life Sciences, 2019, 76, 4131-4144.	5.4	22
64	Complex formation and cytotoxicity of Triapine derivatives: a comparative solution study on the effect of the chalcogen atom and NH-methylation. Dalton Transactions, 2020, 49, 16887-16902.	3.3	22
65	Experimental data-driven tumor modeling for chemotherapy. IFAC-PapersOnLine, 2020, 53, 16245-16250.	0.9	22
66	Unshielding Multidrug Resistant Cancer through Selective Iron Depletion of P-Glycoprotein–Expressing Cells. Cancer Research, 2020, 80, 663-674.	0.9	21
67	Comparing Solid Tumors with Cell Lines: Implications for Identifying Drug Resistance Genes in Cancer. Molecular Interventions: Pharmacological Perspectives From Biology, Chemistry and Genomics, 2004, 4, 323-325.	3.4	21
68	P glycoprotein and the Mechanism of Multidrug Resistance. Novartis Foundation Symposium, 2008, , 54-68.	1.1	20
69	Screening the Expression of ABCB6 in Erythrocytes Reveals an Unexpectedly High Frequency of Lan Mutations in Healthy Individuals. PLoS ONE, 2014, 9, e111590.	2.5	20
70	Identification of anticancer OATP2B1 substrates by an in vitro triple-fluorescence-based cytotoxicity screen. Archives of Toxicology, 2019, 93, 953-964.	4.2	20
71	Dissecting the Forces that Dominate Dimerization of the Nucleotide Binding Domains of ABCB1. Biophysical Journal, 2018, 114, 331-342.	0.5	19
72	Acquired nintedanib resistance in FGFR1-driven small cell lung cancer: role of endothelin-A receptor-activated ABCB1 expression. Oncotarget, 2016, 7, 50161-50179.	1.8	19

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73	Structure–Activity Relationships of 8-Hydroxyquinoline-Derived Mannich Bases with Tertiary Amines Targeting Multidrug-Resistant Cancer. Journal of Medicinal Chemistry, 2022, 65, 7729-7745.	6.4	19
74	A novel fluorescenceâ€based functional assay for human OATP1A2 and OATP1C1 identifies interaction between thirdâ€generation Pâ€gp inhibitors and OATP1A2. FEBS Journal, 2020, 287, 2468-2485.	4.7	18
75	ABCB6 Resides in Melanosomes and Regulates Early Steps of Melanogenesis Required for PMEL Amyloid Matrix Formation. Journal of Molecular Biology, 2018, 430, 3802-3818.	4.2	17
76	Expression pattern of the human ABC transporters in pluripotent embryonic stem cells and in their derivatives., 2014,, n/a-n/a.		16
77	Fluorescent probes for the dual investigation of MRP2 and OATP1B1 function and drug interactions. European Journal of Pharmaceutical Sciences, 2020, 151, 105395.	4.0	16
78	The Molecular Mysteries Underlying P-glycoprotein-Mediated Multidrug Resistance. Cancer Biology and Therapy, 2004, 3, 382-384.	3.4	15
79	Understanding transport through pharmacological barriers — are we there yet?. Nature Reviews Drug Discovery, 2010, 9, 897-898.	46.4	15
80	Identification of Extracellular Segments by Mass Spectrometry Improves Topology Prediction of Transmembrane Proteins. Scientific Reports, 2017, 7, 42610.	3.3	15
81	Synthesis and anticancer cytotoxicity with structural context of an α-hydroxyphosphonate based compound library derived from substituted benzaldehydes. New Journal of Chemistry, 2019, 43, 14028-14035.	2.8	15
82	Genetic and functional studies of phosphatidyl-inositol 4-kinase type $III\hat{I}\pm$ . Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2011, 1811, 476-483.	2.4	14
83	A novel cyclic RGD-containing peptide polymer improves serum-free adhesion of adipose tissue-derived mesenchymal stem cells to bone implant surfaces. Journal of Materials Science: Materials in Medicine, 2013, 24, 479-488.	3.6	14
84	ABCG2 is not able to catalyze glutathione efflux and does not contribute to GSH-dependent collateral sensitivity. Frontiers in Pharmacology, 2013, 4, 138.	3.5	14
85	Half-sandwich organometallic Ru and Rh complexes of (N,N) donor compounds: effect of ligand methylation on solution speciation and anticancer activity. Dalton Transactions, 2021, 50, 8218-8231.	3.3	14
86	Expression pattern of the human ABC transporters in pluripotent embryonic stem cells and in their derivatives., 2014, 86, 299-310.		13
87	Synthesis and Anticancer Cytotoxicity of Azaaurones Overcoming Multidrug Resistance. Molecules, 2020, 25, 764.	3.8	13
88	A new fluorescent dye accumulation assay for parallel measurements of the ABCG2, ABCB1 and ABCC1 multidrug transporter functions. PLoS ONE, 2018, 13, e0190629.	2.5	13
89	Molecular Mechanism of Taurocholate Transport by the Bile Salt Export Pump, an ABC Transporter Associated with Intrahepatic Cholestasis. Molecular Pharmacology, 2017, 92, 401-413.	2.3	12
90	Synthesis and SAR Study of Anticancer Protoflavone Derivatives: Investigation of Cytotoxicity and Interaction with ABCB1 and ABCG2 Multidrug Efflux Transporters. ChemMedChem, 2017, 12, 850-859.	3.2	11

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91	Human ABCB1 with an ABCB11-like degenerate nucleotide binding site maintains transport activity by avoiding nucleotide occlusion. PLoS Genetics, 2020, 16, e1009016.	3.5	11
92	Identifying Novel Inhibitors for Hepatic Organic Anion Transporting Polypeptides by Machine Learning-Based Virtual Screening. Journal of Chemical Information and Modeling, 2022, 62, 6323-6335.	5 <b>.</b> 4	11
93	Establishment and Characterization of a Brca $1\hat{a}^2/\hat{a}^2$ , p53 $\hat{a}^2/\hat{a}^2$ Mouse Mammary Tumor Cell Line. International Journal of Molecular Sciences, 2020, 21, 1185.	4.1	10
94	Generation of a Homozygous Transgenic Rat Strain Stably Expressing a Calcium Sensor Protein for Direct Examination of Calcium Signaling. Scientific Reports, 2015, 5, 12645.	3.3	9
95	Development of novel cyclic NGR peptide–daunomycin conjugates with dual targeting property. Beilstein Journal of Organic Chemistry, 2018, 14, 911-918.	2,2	9
96	Celecoxib Prevents Doxorubicin-Induced Multidrug Resistance in Canine and Mouse Lymphoma Cell Lines. Cancers, 2020, 12, 1117.	3.7	9
97	Relation of Metal-Binding Property and Selective Toxicity of 8-Hydroxyquinoline Derived Mannich Bases Targeting Multidrug Resistant Cancer Cells. Cancers, 2021, 13, 154.	3.7	8
98	Different roles for K+ channels in cisplatin-resistant cell lines argue against a critical role for these channels in cisplatin resistance. Anticancer Research, 2005, 25, 4113-22.	1.1	8
99	Experimental Closed-Loop Control of Breast Cancer in Mice. Complexity, 2022, 2022, 1-10.	1.6	8
100	A mass spectrometry based functional assay for the quantitative assessment of ABC transporter activity. Rapid Communications in Mass Spectrometry, 2009, 23, 3372-3376.	1.5	7
101	A Novel Mathematical Model Describing Adaptive Cellular Drug Metabolism and Toxicity in the Chemoimmune System. PLoS ONE, 2015, 10, e0115533.	2.5	7
102	Data-Driven Ensemble Docking to Map Molecular Interactions of Steroid Analogs with Hepatic Organic Anion Transporting Polypeptides. Journal of Chemical Information and Modeling, 2021, 61, 3109-3127.	5 <b>.</b> 4	7
103	Cytotoxicity of cinchona alkaloid organocatalysts against MES-SA and MES-SA/Dx5 multidrug-resistant uterine sarcoma cell lines. Bioorganic and Medicinal Chemistry, 2022, 67, 116855.	3.0	7
104	Conversion of chemical to mechanical energy by the nucleotide binding domains of ABCB1. Scientific Reports, 2020, 10, 2589.	3.3	6
105	Identifying new topoisomerase II poison scaffolds by combining publicly available toxicity data and 2D/3D-based virtual screening. Journal of Cheminformatics, 2019, 11, 67.	6.1	5
106	The incredible diversity of structures and functions of ABC transporters. FEBS Letters, 2021, 595, 671-674.	2.8	5
107	Multidrug Resistance Mediated by MDR-ABC Transporters. , 2009, , 1-20.		5
108	Efficient Synthesis of Acylated, Dialkyl $\hat{l}_{\pm}$ -Hydroxy-Benzylphosphonates and Their Anticancer Activity. Molecules, 2022, 27, 2067.	3.8	5

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109	Mesenchymal-Stromal Cell-like Melanoma-Associated Fibroblasts Increase IL-10 Production by Macrophages in a Cyclooxygenase/Indoleamine 2,3-Dioxygenase-Dependent Manner. Cancers, 2021, 13, 6173.	3.7	5
110	Optimized Synthesis and Cytotoxic Activity of $\hat{l}_{\pm}$ -Aminophosphonates Against a Multidrug Resistant Uterine Sarcoma Cell Line. Letters in Drug Design and Discovery, 2023, 20, 365-371.	0.7	5
111	Characterization of new, efficient Mycobacterium tuberculosis topoisomerase-I inhibitors and their interaction with human ABC multidrug transporters. PLoS ONE, 2018, 13, e0202749.	2.5	4
112	Active transport of rhodamine 123 by the human multidrug transporter Pâ€glycoprotein involves two independent outer gates. Pharmacology Research and Perspectives, 2020, 8, e00572.	2.4	4
113	In vivo characterization of [18F]AVT-011 as a radiotracer for PET imaging of multidrug resistance. European Journal of Nuclear Medicine and Molecular Imaging, 2020, 47, 2026-2035.	6.4	3
114	Heterologous expression of CTP:phosphocholine cytidylyltransferase from Plasmodium falciparum rescues Chinese Hamster Ovary cells deficient in the Kennedy phosphatidylcholine biosynthesis pathway. Scientific Reports, 2018, 8, 8932.	3.3	2
115	REAP: revealing drug tolerant persister cells in cancer using contrast enhanced optical coherence and photoacoustic tomography. JPhys Photonics, 2021, 3, 021001.	4.6	1
116	Inborn Errors of the Cellular Expression and Localization of ABCG2 and ABCB6. A Database for ABC Transporter Mutations., 2016,, 341-355.		0
117	Nucleotides Control the Conformation of the Motor Domain of ABC Transporters. Biophysical Journal, 2017, 112, 571a.	0.5	0
118	Abstract 2119: Acquired nintedanib resistance in FGFR1-driven small cell but not non-small cell lung cancer is mediated by ABCB1., 2016, , .		0
119	Title is missing!. , 2020, 16, e1009016.		0
120	Title is missing!. , 2020, 16, e1009016.		0
121	Title is missing!. , 2020, 16, e1009016.		0
122	Title is missing!. , 2020, 16, e1009016.		0