Tomas Simunek

List of Publications by Year in descending order

95 papers	3,251 citations	147801 31 h-index	155660 55 g-index
98 all docs	98 docs citations	98 times ranked	4223 citing authors

#	Article	IF	Citations
1	Anthracycline-induced cardiotoxicity: Overview of studies examining the roles of oxidative stress and free cellular iron. Pharmacological Reports, 2009, 61, 154-171.	3.3	633
2	Oxidative Stress, Redox Signaling, and Metal Chelation in Anthracycline Cardiotoxicity and Pharmacological Cardioprotection. Antioxidants and Redox Signaling, 2013, 18, 899-929.	5.4	267
3	Water-soluble non-aggregating zinc phthalocyanine and in vitro studies for photodynamic therapy. Chemical Communications, 2013, 49, 11149.	4.1	133
4	Flavonoids as protectors against doxorubicin cardiotoxicity: Role of iron chelation, antioxidant activity and inhibition of carbonyl reductase. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2007, 1772, 1065-1074.	3.8	97
5	Far-Red-Absorbing Cationic Phthalocyanine Photosensitizers: Synthesis and Evaluation of the Photodynamic Anticancer Activity and the Mode of Cell Death Induction. Journal of Medicinal Chemistry, 2015, 58, 1736-1749.	6.4	95
6	SIHâ€”a novel lipophilic iron chelatorâ€”protects H9c2 cardiomyoblasts from oxidative stress-induced mitochondrial injury and cell death. Journal of Molecular and Cellular Cardiology, 2005, 39, 345-354.	1.9	85
7	The role of reactive oxygen and nitrogen species in cellular iron metabolism. Free Radical Research, 2006, 40, 263-272.	3.3	75
8	Troponin as a marker of myocardiac damage in drug-induced cardiotoxicity. Expert Opinion on Drug Safety, 2005, 4, 457-472.	2.4	64
9	Comparison of Clinically Used and Experimental Iron Chelators for Protection against Oxidative Stress-Induced Cellular Injury. Chemical Research in Toxicology, 2010, 23, 1105-1114.	3.3	61
10	Exploring the Anti-Cancer Activity of Novel Thiosemicarbazones Generated through the Combination of Retro-Fragments: Dissection of Critical Structure-Activity Relationships. PLoS ONE, 2014, 9, e110291.	2.5	61
11	Catalytic Inhibitors of Topoisomerase II Differently Modulate the Toxicity of Anthracyclines in Cardiac and Cancer Cells. PLoS ONE, 2013, 8, e76676.	2.5	58
12	Proteomic insights into chronic anthracycline cardiotoxicity. Journal of Molecular and Cellular Cardiology, 2011, 50, 849-862.	1.9	57
13	Anthracycline-Induced Cardiotoxicity. Acta Medica (Hradec Kralove), 2000, 43, 75-82.	0.5	57
14	In vitro and in vivo examination of cardiac troponins as biochemical markers of drug-induced cardiotoxicity. Toxicology, 2007, 237, 218-228.	4.2	55
15	Dexrazoxane-afforded protection against chronic anthracycline cardiotoxicity in vivo: effective rescue of cardiomyocytes from apoptotic cell death. British Journal of Cancer, 2009, 101, 792-802.	6.4	53
16	Rabbit model for in vivo study of anthracycline-induced heart failure and for the evaluation of protective agents. European Journal of Heart Failure, 2004, 6, 377-387.	7.1	52
17	Synthesis and Initial in Vitro Evaluations of Novel Antioxidant Aroylhydrazone Iron Chelators with Increased Stability against Plasma Hydrolysis. Chemical Research in Toxicology, 2011, 24, 290-302.	3.3	52
18	Chronic Anthracycline Cardiotoxicity: Molecular and Functional Analysis with Focus on Nuclear Factor Erythroid 2-Related Factor 2 and Mitochondrial Biogenesis Pathways. Journal of Pharmacology and Experimental Therapeutics, 2012, 343, 468-478.	2.5	48

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19	Deferiprone Does Not Protect against Chronic Anthracycline Cardiotoxicity in Vivo. Journal of Pharmacology and Experimental Therapeutics, 2008, 326, 259-269.	2.5	43
20	Iron is not involved in oxidative stress-mediated cytotoxicity of doxorubicin and bleomycin. British Journal of Pharmacology, 2006, 149, 920-930.	5.4	42
21	Anthracycline toxicity to cardiomyocytes or cancer cells is differently affected by iron chelation with salicylaldehyde isonicotinoyl hydrazone. British Journal of Pharmacology, 2008, 155, 138-148.	5.4	42
22	Iron chelation with salicylaldehyde isonicotinoyl hydrazone protects against catecholamine autoxidation and cardiotoxicity. Free Radical Biology and Medicine, 2011, 50, 537-549.	2.9	42
23	Methyl and ethyl ketone analogs of salicylaldehyde isonicotinoyl hydrazone: Novel iron chelators with selective antiproliferative action. Chemico-Biological Interactions, 2012, 197, 69-79.	4.0	41
24	Cardioprotective Effects of a Novel Iron Chelator, Pyridoxal 2-Chlorobenzoyl Hydrazone, in the Rabbit Model of Daunorubicin-Induced Cardiotoxicity. Journal of Pharmacology and Experimental Therapeutics, 2006, 319, 1336-1347.	2.5	40
25	Study of daunorubicin cardiotoxicity prevention with pyridoxal isonicotinoyl hydrazone in rabbits. Pharmacological Research, 2005, 51, 223-231.	7.1	39
26	Molecular Remodeling of Left and Right Ventricular Myocardium in Chronic Anthracycline Cardiotoxicity and Post-Treatment Follow Up. PLoS ONE, 2014, 9, e96055.	2.5	38
27	Amino acid derivatives as transdermal permeation enhancers. Journal of Controlled Release, 2013, 165, 91-100.	9.9	37
28	Comparative study of chronic toxic effects of daunorubicin and doxorubicin in rabbits. Human and Experimental Toxicology, 2002, 21, 649-657.	2.2	36
29	Comparison of various iron chelators used in clinical practice as protecting agents against catecholamine-induced oxidative injury and cardiotoxicity. Toxicology, 2011, 289, 122-131.	4.2	35
30	Novel and potent anti-tumor and anti-metastatic di-2-pyridylketone thiosemicarbazones demonstrate marked differences in pharmacology between the first and second generation lead agents. Oncotarget, 2015, 6, 42411-42428.	1.8	34
31	Iron chelation-afforded cardioprotection against chronic anthracycline cardiotoxicity: A study of salicylaldehyde isonicotinoyl hydrazone (SIH). Toxicology, 2007, 235, 150-166.	4.2	32
32	Aroylhydrazone iron chelators: Tuning antioxidant and antiproliferative properties by hydrazide modifications. European Journal of Medicinal Chemistry, 2016, 120, 97-110.	5.5	31
33	Tetra(3,4-pyrido)porphyrazines Caught in the Cationic Cage: Toward Nanomolar Active Photosensitizers. Journal of Medicinal Chemistry, 2016, 59, 9443-9456.	6.4	31
34	New iron chelators in anthracycline-induced cardiotoxicity. Cardiovascular Toxicology, 2007, 7, 145-150.	2.7	30
35	Binding of an amphiphilic phthalocyanine to pre-formed liposomes confers light-triggered cargo release. Journal of Materials Chemistry B, 2018, 6, 7298-7305.	5.8	30
36	Myocardial regulatory proteins and heart failure. European Journal of Heart Failure, 2006, 8, 333-342.	7.1	29

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37	Early and delayed cardioprotective intervention with dexrazoxane each show different potential for prevention of chronic anthracycline cardiotoxicity in rabbits. Toxicology, 2013, 311, 191-204.	4.2	28
38	Comparison of various iron chelators and prochelators as protective agents against cardiomyocyte oxidative injury. Free Radical Biology and Medicine, 2014, 74, 210-221.	2.9	28
39	The Novel Iron Chelator, 2-Pyridylcarboxaldehyde 2-Thiophenecarboxyl Hydrazone, Reduces Catecholamine-Mediated Myocardial Toxicity. Chemical Research in Toxicology, 2009, 22, 208-217.	3.3	27
40	Investigation of novel dexrazoxane analogue JR-311 shows significant cardioprotective effects through topoisomerase IIbeta but not its iron chelating metabolite. Toxicology, 2017, 392, 1-10.	4.2	25
41	In vivo and in vitro assessment of the role of glutathione antioxidant system in anthracycline-induced cardiotoxicity. Archives of Toxicology, 2011, 85, 525-535.	4.2	24
42	Clinically Translatable Prevention of Anthracycline Cardiotoxicity by Dexrazoxane Is Mediated by Topoisomerase II Beta and Not Metal Chelation. Circulation: Heart Failure, 2021, 14, e008209.	3.9	24
43	Quantitative Analysis of the Anti-Proliferative Activity of Combinations of Selected Iron-Chelating Agents and Clinically Used Anti-Neoplastic Drugs. PLoS ONE, 2014, 9, e88754.	2.5	23
44	Myocardial content of selected elements in experimental anthracycline-induced cardiomyopathy in rabbits. BioMetals, 2005, 18, 163-169.	4.1	20
45	Synthesis and analysis of novel analogues of dexrazoxane and its open-ring hydrolysis product for protection against anthracycline cardiotoxicity in vitro and in vivo. Toxicology Research, 2015, 4, 1098-1114.	2.1	20
46	Cardioprotective effects of inorganic nitrate/nitrite in chronic anthracycline cardiotoxicity: Comparison with dexrazoxane. Journal of Molecular and Cellular Cardiology, 2016, 91, 92-103.	1.9	20
47	Anionic hexadeca-carboxylate tetrapyrazinoporphyrazine: synthesis and in vitro photodynamic studies of a water-soluble, non-aggregating photosensitizer. RSC Advances, 2016, 6, 10064-10077.	3.6	17
48	A Study of Potential Toxic Effects After Repeated 10-Week Administration of a New Iron Chelator â€“ Salicylaldehyde Isonicotinoyl Hydrazone (SIH) to Rabbits. Acta Medica (Hradec Kralove), 2003, 46, 163-170.	0.5	17
49	DNA topoisomerase IIÎ²: A player in regulation of gene expression and cell differentiation. International Journal of Biochemistry and Cell Biology, 2012, 44, 834-837.	2.8	16
50	Cardioprotective Potential of Iron Chelators and Prochelators. Current Medicinal Chemistry, 2019, 26, 288-301.	2.4	16
51	Direct administration of rutin does not protect against catecholamine cardiotoxicity. Toxicology, 2009, 255, 25-32.	4.2	15
52	Structure-Activity Relationships of Novel Salicylaldehyde Isonicotinoyl Hydrazone (SIH) Analogs: Iron Chelation, Anti-Oxidant and Cytotoxic Properties. PLoS ONE, 2014, 9, e112059.	2.5	15
53	Heteroatom-substituted tetra(3,4-pyrido)porphyrazines: a stride toward near-infrared-absorbing macrocycles. Organic and Biomolecular Chemistry, 2015, 13, 5608-5612.	2.8	15
54	Pharmacokinetics of the Cardioprotective Drug Dexrazoxane and Its Active Metabolite ADR-925 with Focus on Cardiomyocytes and the Heart. Journal of Pharmacology and Experimental Therapeutics, 2018, 364, 433-446.	2.5	15

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55	Cardioprotective effects of iron chelator HAPI and ROS-activated boronate prochelator BHAPI against catecholamine-induced oxidative cellular injury. Toxicology, 2016, 371, 17-28.	4.2	14
56	Investigation of Structure-Activity Relationships of Dexrazoxane Analogs Reveals Topoisomerase IIÎ²Interaction as a Prerequisite for Effective Protection against Anthracycline Cardiotoxicity. Journal of Pharmacology and Experimental Therapeutics, 2020, 373, 402-415.	2.5	14
57	Structureâ€“Activity Relationship Study of Dexrazoxane Analogues Reveals ICRF-193 as the Most Potent Bisdioxopiperazine against Anthracycline Toxicity to Cardiomyocytes Due to Its Strong Topoisomerase IIÎ² Interactions. Journal of Medicinal Chemistry, 2021, 64, 3997-4019.	6.4	14
58	Cardiac troponin T as an indicator of reduced left ventricular contractility in experimental anthracycline-induced cardiomyopathy. Cancer Chemotherapy and Pharmacology, 2003, 52, 431-434.	2.3	13
59	Proteomic investigation of embryonic rat heart-derived H9c2 cell line sheds new light on the molecular phenotype of the popular cell model. Experimental Cell Research, 2015, 339, 174-186.	2.6	13
60	LCâ€“UV/MS methods for the analysis of prochelatorâ€”Boronyl salicylaldehyde isonicotinoyl hydrazone (BSIH) and its active chelator salicylaldehyde isonicotinoyl hydrazone (SIH). Journal of Pharmaceutical and Biomedical Analysis, 2015, 105, 55-63.	2.8	13
61	A study of potential toxic effects after repeated 10-week administration of a new iron chelator--salicylaldehyde isonicotinoyl hydrazone (SIH) to rabbits. Acta Medica (Hradec Kralove), 2003, 46, 163-70.	0.5	13
62	Safety and tolerability of repeated administration of pyridoxal 2-chlorobenzoyl hydrazone in rabbits. Human and Experimental Toxicology, 2005, 24, 581-589.	2.2	12
63	Characterization of cytoprotective and toxic properties of iron chelator SIH, prochelator BSIH and their degradation products. Toxicology, 2016, 350-352, 15-24.	4.2	10
64	In vitro and in vivo investigation of cardiotoxicity associated with anticancer proteasome inhibitors and their combination with anthracycline. Clinical Science, 2019, 133, 1827-1844.	4.3	10
65	Development of LCâ€“MS/MS method for the simultaneous analysis of the cardioprotective drug dexrazoxane and its metabolite ADR-925 in isolated cardiomyocytes and cell culture medium. Journal of Pharmaceutical and Biomedical Analysis, 2013, 76, 243-251.	2.8	9
66	Pyridoxal Isonicotinoyl Hydrazone (PIH) and its Analogs as Protectants Against Anthracycline-Induced Cardiotoxicity. Hemoglobin, 2008, 32, 207-215.	0.8	8
67	Prodrug of ICRF-193 provides promising protective effects against chronic anthracycline cardiotoxicity in a rabbit modelin vivo. Clinical Science, 2021, 135, 1897-1914.	4.3	8
68	Simultaneous determination of the novel thiosemicarbazone antiâ€cancer agent, Bp4eT, and its main phase I metabolites in plasma: Application to a pilot pharmacokinetic study in rats. Biomedical Chromatography, 2014, 28, 621-629.	1.7	7
69	2,6-Dihydroxybenzaldehyde Analogues of the Iron Chelator Salicylaldehyde Isonicotinoyl Hydrazone: Increased Hydrolytic Stability and Cytoprotective Activity against Oxidative Stress. Chemical Research in Toxicology, 2018, 31, 1151-1163.	3.3	7
70	In Vitro Characterization of the Pharmacological Properties of the Anti-Cancer Chelator, Bp4eT, and Its Phase I Metabolites. PLoS ONE, 2015, 10, e0139929.	2.5	7
71	The Fate of Iron in The Organism and Its Regulatory Pathways. Acta Medica (Hradec Kralove), 2005, 48, 127-135.	0.5	7
72	Intravenous rutin in rat exacerbates isoprenaline-induced cardiotoxicity likely due to intracellular oxidative stress. Redox Report, 2017, 22, 78-90.	4.5	6

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73	Development of water-soluble prodrugs of the bisdioxopiperazine topoisomerase IIÎ² inhibitor ICRF-193 as potential cardioprotective agents against anthracycline cardiotoxicity. Scientific Reports, 2021, 11, 4456.	3.3	6
74	Pharmacy Practice and Education in the Czech Republic. Pharmacy (Basel, Switzerland), 2017, 5, 54.	1.6	5
75	Structureâ€“Activity Relationships of Nitro-Substituted Aroylhydrazone Iron Chelators with Antioxidant and Antiproliferative Activities. Chemical Research in Toxicology, 2018, 31, 435-446.	3.3	5
76	Novel SPME fibers based on a plastic support for determination of plasma protein binding of thiosemicarbazone metal chelators: a case example of DpC, an anti-cancer drug that entered clinical trials. Analytical and Bioanalytical Chemistry, 2019, 411, 2383-2394.	3.7	5
77	Protective Effects of D-Penicillamine on Catecholamine-Induced Myocardial Injury. Oxidative Medicine and Cellular Longevity, 2016, 2016, 1-10.	4.0	4
78	The fate of iron in the organism and its regulatory pathways. Acta Medica (Hradec Kralove), 2005, 48, 127-35.	0.5	4
79	Large-Scale Synthesis of Piperazine-2,6-dione and Its Use in the Synthesis of Dexrazoxane Analogues. Synthesis, 2016, 48, 4580-4588.	2.3	3
80	UHPLC-MS/MS method for analysis of sobuzoxane, its active form ICRF-154 and metabolite EDTA-diamide and its application to bioactivation study. Scientific Reports, 2019, 9, 4524.	3.3	2
81	Troponins in Experimental Studies. Acta Medica (Hradec Kralove), 2002, 45, 29-32.	0.5	2
82	Effect of Sodium 2,3-Dimercaptopropane-1-Sulphonate (DMPS) on Chronic Daunorubicin Toxicity in Rabbits: Comparison with Dexrazoxane. Acta Medica (Hradec Kralove), 2002, 45, 99-105.	0.5	2
83	Effect of sodium 2,3-dimercaptopropane-1-sulphonate (DMPS) on chronic daunorubicin toxicity in rabbits: comparison with dexrazoxane. Acta Medica (Hradec Kralove), 2002, 45, 99-105.	0.5	2
84	Examination of diverse iron-chelating agents for the protection of differentiated PC12 cells against oxidative injury induced by 6-hydroxydopamine and dopamine. Scientific Reports, 2022, 12, .	3.3	2
85	Cardiac remodeling and the role of matrix metalloproteinases in chronic anthracycline cardiotoxicity. Journal of Molecular and Cellular Cardiology, 2006, 40, 1001.	1.9	1
86	Are cardioprotective effects of NO-releasing drug molsidomine translatable to chronic anthracycline cardiotoxicity settings?. Toxicology, 2016, 372, 52-63.	4.2	1
87	A Pilot Study of Matrix Metalloproteinases on the Model of Daunorubicin-induced Cardiomyopathy in Rabbits. Acta Medica (Hradec Kralove), 2007, 50, 109-111.	0.5	1
88	Primary prevention of chronic anthracycline cardiotoxicity with ACE inhibitor is temporarily effective in rabbits, but benefits wane in post-treatment follow-up. Clinical Science, 2022, 136, 139-161.	4.3	1
89	Troponins for predicting cardiotoxic or cardioprotective effects of new drugs. Journal of Molecular and Cellular Cardiology, 2002, 34, A3.	1.9	0
90	Comparison of protection by salicylaldehyde isonicotinoyl hydrazone (SIH) against hydrogen peroxide- and anthracycline-induced toxicity to cardiac cells. Toxicology Letters, 2008, 180, S117.	0.8	0

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91	STUDY OF MOLECULAR MECHANISMS INVOLVED IN CARDIOPROTECTIVE ACTION OF DEXRAZOXANE AGAINST ANTHRACYCLINE CARDIOTOXICITY IN RABBITS. Heart, 2014, 100, A7.3-A8.	2.9	0
92	ANTHRACYCLINE CARDIOTOXICITY: THE PHARMACOKINETICS AND PHARMACODYNAMICS OF DEXRAZOXANE AND ITS OPEN RING METABOLITE. Heart, 2014, 100, A7.1-A7.	2.9	0
93	CAN INORGANIC NITRATE/NITRITE EFFECTIVELY OVERCOME CHRONIC ANTHRACYCLINE CARDIOTOXICITY IN RABBITS?. Heart, 2014, 100, A8.1-A8.	2.9	0
94	79â€...Effective cardioprotection against anthracycline cardiotoxicity in isolated cardiomyocytes and rabbits is based on dexrazoxane interaction with topoisomerase II beta instead of iron chelation by its metabolite ADR-925. , 2019, , .		0
95	Influence of cationic, anionic or non-charged substituents on photodynamic activity of water-soluble zinc (aza)phthalocyanines. , 2019, , .		0