Katerina Vavrova

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Synthesis and Functionalization of 5â€&ubstituted Tetrazoles. European Journal of Organic Chemistry, 2012, 6101-6118.	2.4	236
2	Permeation enhancers in transdermal drug delivery: benefits and limitations. Expert Opinion on Drug Delivery, 2020, 17, 145-155.	5.0	203
3	Phase I/II clinical trial of dendritic-cell based immunotherapy (DCVAC/PCa) combined with chemotherapy in patients with metastatic, castration-resistant prostate cancer. Oncotarget, 2015, 6, 18192-18205.	1.8	111
4	Filaggrin Deficiency Leads to Impaired Lipid Profile and Altered Acidification Pathways in a 3D Skin Construct. Journal of Investigative Dermatology, 2014, 134, 746-753.	0.7	106
5	Ceramides in the Skin Lipid Membranes: Length Matters. Langmuir, 2013, 29, 15624-15633.	3.5	101
6	Interactions of Hyaluronic Acid with the Skin and Implications for the Dermal Delivery of Biomacromolecules. Molecular Pharmaceutics, 2015, 12, 1391-1401.	4.6	97
7	Development of 3,5-Dinitrobenzylsulfanyl-1,3,4-oxadiazoles and Thiadiazoles as Selective Antitubercular Agents Active Against Replicating and Nonreplicating <i>Mycobacterium tuberculosis</i> . Journal of Medicinal Chemistry, 2016, 59, 2362-2380.	6.4	85
8	Effect of ceramide acyl chain length on skin permeability and thermotropic phase behavior of model stratum corneum lipid membranes. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2011, 1811, 129-137.	2.4	69
9	Different Phase Behavior and Packing of Ceramides with Long (C16) and Very Long (C24) Acyls in Model Membranes: Infrared Spectroscopy Using Deuterated Lipids. Journal of Physical Chemistry B, 2014, 118, 10460-10470.	2.6	65
10	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
11	New fluorine-containing hydrazones active against MDR-tuberculosis. European Journal of Medicinal Chemistry, 2011, 46, 4937-4945.	5.5	57
12	TSLP is a direct trigger for T cell migration in filaggrin-deficient skin equivalents. Scientific Reports, 2017, 7, 774.	3.3	57
13	Synthesis and Initial <i>in Vitro</i> Evaluations of Novel Antioxidant Aroylhydrazone Iron Chelators with Increased Stability against Plasma Hydrolysis. Chemical Research in Toxicology, 2011, 24, 290-302.	3.3	52
14	Phytosphingosine, sphingosine and dihydrosphingosine ceramides in model skin lipid membranes: permeability and biophysics. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 824-834.	2.6	51
15	S-substituted 3,5-dinitrophenyl 1,3,4-oxadiazole-2-thiols and tetrazole-5-thiols as highly efficient antitubercular agents. European Journal of Medicinal Chemistry, 2017, 126, 369-383.	5.5	50
16	Permeability and microstructure of model stratum corneum lipid membranes containing ceramides with long (C16) and very long (C24) acyl chains. Biophysical Chemistry, 2017, 224, 20-31.	2.8	49
17	Effects of sphingomyelin/ceramide ratio on the permeability and microstructure of model stratum corneum lipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2115-2126.	2.6	46
18	Structural Changes in Ceramide Bilayers Rationalize Increased Permeation through Stratum Corneum Models with Shorter Acyl Tails. Journal of Physical Chemistry B, 2015, 119, 9811-9819.	2.6	46

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19	Practical Synthesis of 5-Substituted Tetrazoles under Microwave Irradiation. Synthesis, 2009, 2009, 2175-2178.	2.3	45
20	Esters of terpene alcohols as highly potent, reversible, and low toxic skin penetration enhancers. Scientific Reports, 2019, 9, 14617.	3.3	45
21	1-Substituted-5-[(3,5-dinitrobenzyl)sulfanyl]-1H-tetrazoles and their isosteric analogs: A new class of selective antitubercular agents active against drug-susceptible and multidrug-resistant mycobacteria. European Journal of Medicinal Chemistry, 2014, 82, 324-340.	5.5	44
22	Stimulation of PPARα normalizes the skin lipid ratio and improves the skin barrier of normal and filaggrin deficient reconstructed skin. Journal of Dermatological Science, 2015, 80, 102-110.	1.9	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	Fibroblast origin shapes tissue homeostasis, epidermal differentiation, and drug uptake. Scientific Reports, 2019, 9, 2913.	3.3	41
25	Probing the Role of the Ceramide Acyl Chain Length and Sphingosine Unsaturation in Model Skin Barrier Lipid Mixtures by ² H Solid-State NMR Spectroscopy. Langmuir, 2015, 31, 4906-4915.	3.5	40
26	Tetrazole regioisomers in the development of nitro group-containing antitubercular agents. MedChemComm, 2015, 6, 174-181.	3.4	40
27	Synthetic ceramide analogues as skin permeation enhancers: structure–Activity relationships. Bioorganic and Medicinal Chemistry, 2003, 11, 5381-5390.	3.0	39
28	l-Serine and glycine based ceramide analogues as transdermal permeation enhancers: polar head size and hydrogen bonding. Bioorganic and Medicinal Chemistry Letters, 2003, 13, 2351-2353.	2.2	38
29	Salicylanilide carbamates: Antitubercular agents active against multidrug-resistant Mycobacterium tuberculosis strains. Bioorganic and Medicinal Chemistry, 2010, 18, 1054-1061.	3.0	38
30	Development of water-soluble 3,5-dinitrophenyl tetrazole and oxadiazole antitubercular agents. Bioorganic and Medicinal Chemistry, 2017, 25, 5468-5476.	3.0	38
31	Amino acid derivatives as transdermal permeation enhancers. Journal of Controlled Release, 2013, 165, 91-100.	9.9	37
32	Development of 3,5-Dinitrophenyl-Containing 1,2,4-Triazoles and Their Trifluoromethyl Analogues as Highly Efficient Antitubercular Agents Inhibiting Decaprenylphosphoryl-β- <scp>d</scp> -ribofuranose 2′-Oxidase. Journal of Medicinal Chemistry, 2019, 62, 8115-8139.	6.4	37
33	Biodegradable derivatives of tranexamic acid as transdermal permeation enhancers. Journal of Controlled Release, 2005, 104, 41-49.	9.9	36
34	Phase I/II trial of dendritic cell-based active cellular immunotherapy with DCVAC/PCa in patients with rising PSA after primary prostatectomy or salvage radiotherapy for the treatment of prostate cancer. Cancer Immunology, Immunotherapy, 2018, 67, 89-100.	4.2	36
35	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
36	Transdermal and dermal delivery of adefovir: Effects of pH and permeation enhancers. European Journal of Pharmaceutics and Biopharmaceutics, 2008, 69, 597-604.	4.3	34

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37	The barrier function of organotypic non-melanoma skin cancer models. Journal of Controlled Release, 2016, 233, 10-18.	9.9	33
38	Impact of intercellular crosstalk between epidermal keratinocytes and dermal fibroblasts on skin homeostasis. Biochimica Et Biophysica Acta - Molecular Cell Research, 2020, 1867, 118722.	4.1	33
39	Synthesis and Enhancing Effect of Transkarbam 12 on the Transdermal Delivery of Theophylline, Clotrimazole, Flobufen, and Griseofulvin. Pharmaceutical Research, 2006, 23, 912-919.	3.5	31
40	Dimethylamino Acid Esters as Biodegradable and Reversible Transdermal Permeation Enhancers: Effects of Linking Chain Length, Chirality and Polyfluorination. Pharmaceutical Research, 2009, 26, 811-821.	3.5	31
41	Aroylhydrazone iron chelators: Tuning antioxidant and antiproliferative properties by hydrazide modifications. European Journal of Medicinal Chemistry, 2016, 120, 97-110.	5.5	31
42	Structure-activity relationship studies on 3,5-dinitrophenyl tetrazoles as antitubercular agents. European Journal of Medicinal Chemistry, 2017, 130, 419-432.	5.5	31
43	HILIC/ESI-MS determination of gangliosides and other polar lipid classes in renal cell carcinoma and surrounding normal tissues. Analytical and Bioanalytical Chemistry, 2018, 410, 6585-6594.	3.7	31
44	Influence of terminal branching on the transdermal permeation-enhancing activity in fatty alcohols and acids. Bioorganic and Medicinal Chemistry, 2006, 14, 7681-7687.	3.0	29
45	Synthesis of fluorescent C24-ceramide: Evidence for acyl chain length dependent differences in penetration of exogenous NBD-ceramides into human skin. Bioorganic and Medicinal Chemistry Letters, 2009, 19, 6975-6977.	2.2	29
46	Ammonium carbamates as highly active transdermal permeation enhancers with a dual mechanism of action. Journal of Controlled Release, 2011, 150, 164-170.	9.9	29
47	Omega- <i>O</i> -Acylceramides in Skin Lipid Membranes: Effects of Concentration, Sphingoid Base, and Model Complexity on Microstructure and Permeability. Langmuir, 2016, 32, 12894-12904.	3.5	29
48	Phase separation in ceramide[NP] containing lipid model membranes: neutron diffraction and solid-state NMR. Soft Matter, 2017, 13, 2107-2119.	2.7	27
49	Scalable Synthesis of Human Ultralong Chain Ceramides. Organic Letters, 2015, 17, 5456-5459.	4.6	26
50	Effects of omega-O-acylceramide structures and concentrations in healthy and diseased skin barrier lipid membrane models. Journal of Lipid Research, 2020, 61, 219-228.	4.2	26
51	Mathematical calculations of iron complex stoichiometry by direct UV–Vis spectrophotometry. Bioorganic Chemistry, 2013, 49, 1-8.	4.1	25
52	The Role of the Trans Double Bond in Skin Barrier Sphingolipids: Permeability and Infrared Spectroscopic Study of Model Ceramide and Dihydroceramide Membranes. Langmuir, 2014, 30, 5527-5535.	3.5	24
53	Permeability and microstructure of cholesterol-depleted skin lipid membranes and human stratum corneum. Journal of Colloid and Interface Science, 2019, 535, 227-238.	9.4	24
54	Ceramide analogue 14S24 ((S)-2-tetracosanoylamino-3-hydroxypropionic acid tetradecyl ester) is effective in skin barrier repair in vitro. European Journal of Pharmaceutical Sciences, 2004, 21, 581-587.	4.0	23

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55	HPLC-DAD and MS/MS analysis of novel drug candidates from the group of aromatic hydrazones revealing the presence of geometric isomers. Journal of Pharmaceutical and Biomedical Analysis, 2008, 48, 295-302.	2.8	23
56	Simplified stratum corneum model membranes for studying the effects of permeation enhancers. International Journal of Pharmaceutics, 2017, 534, 287-296.	5.2	23
57	One-pot synthesis of 1-substituted-5-alkylselanyl-1 H -tetrazoles from isoselenocyanates: unexpected formation of N -alkyl- N -arylcyanamides and (Z)- Se -alkyl- N -cyano- N , N′ -diarylisoselenoureas. Tetrahedron, 2013, 69, 8798-8808.	1.9	22
58	Ceramides with a pentadecasphingosine chain and short acyls have strong permeabilization effects on skin and model lipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 220-232.	2.6	22
59	Dodecyl Amino Glucoside Enhances Transdermal and Topical Drug Delivery via Reversible Interaction with Skin Barrier Lipids. Pharmaceutical Research, 2017, 34, 640-653.	3.5	22
60	The Sphingosine and Acyl Chains of Ceramide [NS] Show Very Different Structure and Dynamics That Challenge Our Understanding of the Skin Barrier. Angewandte Chemie - International Edition, 2020, 59, 17383-17387.	13.8	22
61	HPLC method for determination of in vitro delivery through and into porcine skin of adefovir (PMEA). Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2007, 853, 198-203.	2.3	21
62	Permeation enhancer dodecyl 6-(dimethylamino)hexanoate increases transdermal and topical delivery of adefovir: Influence of pH, ion-pairing and skin species. European Journal of Pharmaceutics and Biopharmaceutics, 2008, 70, 901-907.	4.3	21
63	The Chemistry and Biology of 6â€Hydroxyceramide, the Youngest Member of the Human Sphingolipid Family. ChemBioChem, 2014, 15, 1555-1562.	2.6	21
64	Permeability Barrier and Microstructure of Skin Lipid Membrane Models of Impaired Glucosylceramide Processing. Scientific Reports, 2017, 7, 6470.	3.3	21
65	Thermotropic phase behavior of long-chain alkylammonium-alkylcarbamates. Thermochimica Acta, 2006, 441, 116-123.	2.7	20
66	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
67	Transdermal Delivery and Cutaneous Targeting of Antivirals using a Penetration Enhancer and Lysolipid Prodrugs. Pharmaceutical Research, 2014, 31, 1071-1081.	3.5	19
68	Synthesis of 6-hydroxyceramide using ruthenium-catalyzed hydrosilylation–protodesilylation. Unexpected formation of a long periodicity lamellar phase in skin lipid membranes. RSC Advances, 2016, 6, 73343-73350.	3.6	19
69	Cellular and Metabolic Basis for the Ichthyotic Phenotype in NIPAL4 (Ichthyin)–Deficient Canines. American Journal of Pathology, 2018, 188, 1419-1429.	3.8	19
70	Esters of 6-aminohexanoic acid as skin permeation enhancers: The effect of branching in the alkanol moiety. Journal of Pharmaceutical Sciences, 2005, 94, 1494-1499.	3.3	18
71	Synthesis and transdermal permeation-enhancing activity of carbonate and carbamate analogs of Transkarbam 12. Bioorganic and Medicinal Chemistry, 2006, 14, 7671-7680.	3.0	18
72	Hydrophilic interaction liquid chromatography in the separation of a moderately lipophilic drug from its highly polar metabolites—the cardioprotectant dexrazoxane as a model case. Journal of Chromatography A, 2011, 1218, 416-426.	3.7	18

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73	Effects of 6-Hydroxyceramides on the Thermotropic Phase Behavior and Permeability of Model Skin Lipid Membranes. Langmuir, 2017, 33, 2890-2899.	3.5	18
74	Long and very long lamellar phases in model stratum corneum lipid membranes. Journal of Lipid Research, 2019, 60, 963-971.	4.2	18
75	A simple method for the preparation of 5-alkylsulfinyl-1-aryltetrazoles. Tetrahedron Letters, 2004, 45, 7955-7957.	1.4	17
76	Galactosyl Pentadecene Reversibly Enhances Transdermal and Topical Drug Delivery. Pharmaceutical Research, 2017, 34, 2097-2108.	3.5	17
77	LC-MS/MS identification of the principal in vitro and in vivo phase I metabolites of the novel thiosemicarbazone anti-cancer drug, Bp4eT. Analytical and Bioanalytical Chemistry, 2012, 403, 309-321.	3.7	16
78	Probing the role of ceramide hydroxylation in skin barrier lipid models by 2H solid-state NMR spectroscopy and X-ray powder diffraction. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 1162-1170.	2.6	16
79	Synthesis and transdermal permeation-enhancing activity of ketone, amide, and alkane analogs of Transkarbam 12. Bioorganic and Medicinal Chemistry, 2006, 14, 2896-2903.	3.0	15
80	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
81	Synthesis and transdermal penetration-enhancing activity of carbonic and carbamic acid esters—Comparison with transkarbam 12. Bioorganic and Medicinal Chemistry Letters, 2006, 16, 1981-1984.	2.2	14
82	Dicarboxylic acid esters as transdermal permeation enhancers: Effects of chain number and geometric isomers. Bioorganic and Medicinal Chemistry Letters, 2009, 19, 344-347.	2.2	14
83	Chromatographic methods for the separation of biocompatible iron chelators from their synthetic precursors and iron chelates. Journal of Separation Science, 2004, 27, 1503-1510.	2.5	12
84	Fluorescent Penetration Enhancers Reveal Complex Interactions among the Enhancer, Drug, Solvent, and Skin. Molecular Pharmaceutics, 2019, 16, 886-897.	4.6	12
85	Transkarbams with terminal branching as transdermal permeation enhancers. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 1712-1715.	2.2	11
86	Complex modulation of peptidolytic activity of cathepsin D by sphingolipids. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2011, 1811, 1097-1104.	2.4	11
87	Emerging small-molecule compounds for treatment of atopic dermatitis: a review. Expert Opinion on Therapeutic Patents, 2016, 26, 21-34.	5.0	11
88	Comparison of suction blistering and tape stripping for analysis of epidermal genes, proteins and lipids. Archives of Dermatological Research, 2017, 309, 757-765.	1.9	11
89	Ultrastructural and Molecular Analysis of Ribose-Induced Glycated Reconstructed Human Skin. International Journal of Molecular Sciences, 2018, 19, 3521.	4.1	11
90	Acidic pH Is Required for the Multilamellar Assembly of Skin Barrier Lipids InÂVitro. Journal of Investigative Dermatology, 2021, 141, 1915-1921.e4.	0.7	11

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91	One-pot regioselective vinylation of tetrazoles: preparation of 5-substituted 2-vinyl-2H-tetrazoles. Tetrahedron Letters, 2010, 51, 1411-1414.	1.4	10
92	Enhanced Topical and Transdermal Delivery of Antineoplastic and Antiviral Acyclic Nucleoside Phosphonate cPr-PMEDAP. Pharmaceutical Research, 2011, 28, 3105-3115.	3.5	10
93	Effects of Ceramide and Dihydroceramide Stereochemistry at C-3 on the Phase Behavior and Permeability of Skin Lipid Membranes. Langmuir, 2018, 34, 521-529.	3.5	10
94	Transkarbams as transdermal permeation enhancers: Effects of ester position and ammonium carbamate formation. Bioorganic and Medicinal Chemistry Letters, 2010, 20, 2726-2728.	2.2	8
95	Probing the interactions among sphingosine and phytosphingosine ceramides with non- and alpha-hydroxylated acyl chains in skin lipid model membranes. International Journal of Pharmaceutics, 2019, 563, 384-394.	5.2	7
96	Personalized ex vivo multiple peptideÂenrichment and detection of T cells reactive to multiple tumor-associated antigens in prostate cancer patients. Medical Oncology, 2017, 34, 173.	2.5	7
97	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
98	ï‰-O-Acylceramides but not ï‰-hydroxy ceramides are required for healthy lamellar phase architecture of skin barrier lipids. Journal of Lipid Research, 2022, 63, 100226.	4.2	7
99	Generation of T cell effectors using tumor cell-loaded dendritic cells for adoptive T cell therapy. Medical Oncology, 2016, 33, 136.	2.5	6
100	SAMPA: A free software tool for skin and membrane permeation data analysis. Toxicology in Vitro, 2017, 44, 361-371.	2.4	6
101	Behavior of 1-Deoxy-, 3-Deoxy- and N-Methyl-Ceramides in Skin Barrier Lipid Models. Scientific Reports, 2020, 10, 3832.	3.3	6
102	Gentiana lutea Extract Modulates Ceramide Synthesis in Primary and Psoriasis-Like Keratinocytes. Molecules, 2020, 25, 1832.	3.8	6
103	Transdermal Permeation and Skin Retention of Diclofenac and Etofenamate/Flufenamic Acid From Over-the-Counter Pain Relief Products. Journal of Pharmaceutical Sciences, 2021, 110, 2517-2523.	3.3	6
104	Structure–Activity Relationships of Nitro-Substituted Aroylhydrazone Iron Chelators with Antioxidant and Antiproliferative Activities. Chemical Research in Toxicology, 2018, 31, 435-446.	3.3	5
105	Investigation of TEMPO partitioning in different skin models as measured by EPR spectroscopy – Insight into the stratum corneum. Journal of Magnetic Resonance, 2020, 310, 106637.	2.1	5
106	Common Cosmetic Compounds Can Reduce Air Pollution-Induced Oxidative Stress and Pro-Inflammatory Response in the Skin. Skin Pharmacology and Physiology, 2022, 35, 156-165.	2.5	5
107	Cholesterol sulfate fluidizes the sterol fraction of the stratum corneum lipid phase and increases its permeability. Journal of Lipid Research, 2022, 63, 100177.	4.2	5
108	Assembly of Human Stratum Corneum Lipids InÂVitro: Fluidity Matters. Journal of Investigative Dermatology, 2022, 142, 2036-2039.e3.	0.7	5

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109	Research Techniques Made Simple: Lipidomic Analysis in Skin Research. Journal of Investigative Dermatology, 2022, 142, 4-11.e1.	0.7	4
110	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
111	Amino Acid-Based Transdermal Penetration Enhancers. , 2015, , 325-336.		2
112	Transkarbams: Transdermal Penetration-Enhancing Carbamates. , 2015, , 309-323.		0