

# Katerina Vavrova

## List of Publications by Year in descending order

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112  
papers

3,509  
citations

126907

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182427

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docs citations

112  
times ranked

4064  
citing authors

#	ARTICLE	IF	CITATIONS
1	Common Cosmetic Compounds Can Reduce Air Pollution-Induced Oxidative Stress and Pro-Inflammatory Response in the Skin. <i>Skin Pharmacology and Physiology</i> , 2022, 35, 156-165.	2.5	5
2	Research Techniques Made Simple: Lipidomic Analysis in Skin Research. <i>Journal of Investigative Dermatology</i> , 2022, 142, 4-11.e1.	0.7	4
3	Cholesterol sulfate fluidizes the sterol fraction of the stratum corneum lipid phase and increases its permeability. <i>Journal of Lipid Research</i> , 2022, 63, 100177.	4.2	5
4	Assembly of Human Stratum Corneum Lipids In Vitro: Fluidity Matters. <i>Journal of Investigative Dermatology</i> , 2022, 142, 2036-2039.e3.	0.7	5
5	1-O-Acylceramides but not 2-hydroxy ceramides are required for healthy lamellar phase architecture of skin barrier lipids. <i>Journal of Lipid Research</i> , 2022, 63, 100226.	4.2	7
6	Acidic pH Is Required for the Multilamellar Assembly of Skin Barrier Lipids In Vitro. <i>Journal of Investigative Dermatology</i> , 2021, 141, 1915-1921.e4.	0.7	11
7	Transdermal Permeation and Skin Retention of Diclofenac and Etofenamate/Flufenamic Acid From Over-the-Counter Pain Relief Products. <i>Journal of Pharmaceutical Sciences</i> , 2021, 110, 2517-2523.	3.3	6
8	Permeation enhancers in transdermal drug delivery: benefits and limitations. <i>Expert Opinion on Drug Delivery</i> , 2020, 17, 145-155.	5.0	203
9	Investigation of TEMPO partitioning in different skin models as measured by EPR spectroscopy – Insight into the stratum corneum. <i>Journal of Magnetic Resonance</i> , 2020, 310, 106637.	2.1	5
10	Effects of omega-O-acylceramide structures and concentrations in healthy and diseased skin barrier lipid membrane models. <i>Journal of Lipid Research</i> , 2020, 61, 219-228.	4.2	26
11	The Sphingosine and Acyl Chains of Ceramide [NS] Show Very Different Structure and Dynamics That Challenge Our Understanding of the Skin Barrier. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 17383-17387.	13.8	22
12	Behavior of 1-Deoxy-, 3-Deoxy- and N-Methyl-Ceramides in Skin Barrier Lipid Models. <i>Scientific Reports</i> , 2020, 10, 3832.	3.3	6
13	Gentiana lutea Extract Modulates Ceramide Synthesis in Primary and Psoriasis-Like Keratinocytes. <i>Molecules</i> , 2020, 25, 1832.	3.8	6
14	Impact of intercellular crosstalk between epidermal keratinocytes and dermal fibroblasts on skin homeostasis. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2020, 1867, 118722.	4.1	33
15	Development of 3,5-Dinitrophenyl-Containing 1,2,4-Triazoles and Their Trifluoromethyl Analogues as Highly Efficient Antitubercular Agents Inhibiting Decaprenylphosphoryl- $\beta$ -D-ribofuranose 2-Oxidase. <i>Journal of Medicinal Chemistry</i> , 2019, 62, 8115-8139.	6.4	37
16	Esters of terpene alcohols as highly potent, reversible, and low toxic skin penetration enhancers. <i>Scientific Reports</i> , 2019, 9, 14617.	3.3	45
17	Fibroblast origin shapes tissue homeostasis, epidermal differentiation, and drug uptake. <i>Scientific Reports</i> , 2019, 9, 2913.	3.3	41
18	Probing the interactions among sphingosine and phytosphingosine ceramides with non- and alpha-hydroxylated acyl chains in skin lipid model membranes. <i>International Journal of Pharmaceutics</i> , 2019, 563, 384-394.	5.2	7

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19	Long and very long lamellar phases in model stratum corneum lipid membranes. <i>Journal of Lipid Research</i> , 2019, 60, 963-971.	4.2	18
20	Fluorescent Penetration Enhancers Reveal Complex Interactions among the Enhancer, Drug, Solvent, and Skin. <i>Molecular Pharmaceutics</i> , 2019, 16, 886-897.	4.6	12
21	Permeability and microstructure of cholesterol-depleted skin lipid membranes and human stratum corneum. <i>Journal of Colloid and Interface Science</i> , 2019, 535, 227-238.	9.4	24
22	Probing the role of ceramide hydroxylation in skin barrier lipid models by 2H solid-state NMR spectroscopy and X-ray powder diffraction. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2018, 1860, 1162-1170.	2.6	16
23	Effects of Ceramide and Dihydroceramide Stereochemistry at C-3 on the Phase Behavior and Permeability of Skin Lipid Membranes. <i>Langmuir</i> , 2018, 34, 521-529.	3.5	10
24	Cellular and Metabolic Basis for the Ichthyotic Phenotype in NIPAL4 (Ichthyin)â€“Deficient Canines. <i>American Journal of Pathology</i> , 2018, 188, 1419-1429.	3.8	19
25	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. <i>Cancer Immunology, Immunotherapy</i> , 2018, 67, 89-100.	4.2	36
26	Ultrastructural and Molecular Analysis of Ribose-Induced Glycated Reconstructed Human Skin. <i>International Journal of Molecular Sciences</i> , 2018, 19, 3521.	4.1	11
27	Structureâ€“Activity Relationships of Nitro-Substituted Aroylhydrazone Iron Chelators with Antioxidant and Antiproliferative Activities. <i>Chemical Research in Toxicology</i> , 2018, 31, 435-446.	3.3	5
28	HILIC/ESI-MS determination of gangliosides and other polar lipid classes in renal cell carcinoma and surrounding normal tissues. <i>Analytical and Bioanalytical Chemistry</i> , 2018, 410, 6585-6594.	3.7	31
29	Phytosphingosine, sphingosine and dihydrosphingosine ceramides in model skin lipid membranes: permeability and biophysics. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2017, 1859, 824-834.	2.6	51
30	Dodecyl Amino Glucoside Enhances Transdermal and Topical Drug Delivery via Reversible Interaction with Skin Barrier Lipids. <i>Pharmaceutical Research</i> , 2017, 34, 640-653.	3.5	22
31	Effects of 6-Hydroxyceramides on the Thermotropic Phase Behavior and Permeability of Model Skin Lipid Membranes. <i>Langmuir</i> , 2017, 33, 2890-2899.	3.5	18
32	Phase separation in ceramide[NP] containing lipid model membranes: neutron diffraction and solid-state NMR. <i>Soft Matter</i> , 2017, 13, 2107-2119.	2.7	27
33	Structure-activity relationship studies on 3,5-dinitrophenyl tetrazoles as antitubercular agents. <i>European Journal of Medicinal Chemistry</i> , 2017, 130, 419-432.	5.5	31
34	TSLP is a direct trigger for T cell migration in filaggrin-deficient skin equivalents. <i>Scientific Reports</i> , 2017, 7, 774.	3.3	57
35	Permeability and microstructure of model stratum corneum lipid membranes containing ceramides with long (C16) and very long (C24) acyl chains. <i>Biophysical Chemistry</i> , 2017, 224, 20-31.	2.8	49
36	Simplified stratum corneum model membranes for studying the effects of permeation enhancers. <i>International Journal of Pharmaceutics</i> , 2017, 534, 287-296.	5.2	23

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37	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
38	SAMPA: A free software tool for skin and membrane permeation data analysis. Toxicology in Vitro, 2017, 44, 361-371.	2.4	6
39	Permeability Barrier and Microstructure of Skin Lipid Membrane Models of Impaired Glucosylceramide Processing. Scientific Reports, 2017, 7, 6470.	3.3	21
40	Development of water-soluble 3,5-dinitrophenyl tetrazole and oxadiazole antitubercular agents. Bioorganic and Medicinal Chemistry, 2017, 25, 5468-5476.	3.0	38
41	Galactosyl Pentadecene Reversibly Enhances Transdermal and Topical Drug Delivery. Pharmaceutical Research, 2017, 34, 2097-2108.	3.5	17
42	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
43	Personalized ex vivo multiple peptide enrichment and detection of T cells reactive to multiple tumor-associated antigens in prostate cancer patients. Medical Oncology, 2017, 34, 173.	2.5	7
44	The barrier function of organotypic non-melanoma skin cancer models. Journal of Controlled Release, 2016, 233, 10-18.	9.9	33
45	Aroylhydrazone iron chelators: Tuning antioxidant and antiproliferative properties by hydrazide modifications. European Journal of Medicinal Chemistry, 2016, 120, 97-110.	5.5	31
46	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
47	Omega-3-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	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
49	Generation of T cell effectors using tumor cell-loaded dendritic cells for adoptive T cell therapy. Medical Oncology, 2016, 33, 136.	2.5	6
50	Development of 3,5-Dinitrobenzylsulfanyl-1,3,4-oxadiazoles and Thiadiazoles as Selective Antitubercular Agents Active Against Replicating and Nonreplicating Mycobacterium tuberculosis. Journal of Medicinal Chemistry, 2016, 59, 2362-2380.	6.4	85
51	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
52	Emerging small-molecule compounds for treatment of atopic dermatitis: a review. Expert Opinion on Therapeutic Patents, 2016, 26, 21-34.	5.0	11
53	Probing the Role of the Ceramide Acyl Chain Length and Sphingosine Unsaturation in Model Skin Barrier Lipid Mixtures by <sup>2</sup> H Solid-State NMR Spectroscopy. Langmuir, 2015, 31, 4906-4915.	3.5	40
54	Transkarbams: Transdermal Penetration-Enhancing Carbamates. , 2015, , 309-323.		0

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55	Amino Acid-Based Transdermal Penetration Enhancers. , 2015, , 325-336.		2
56	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
57	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
58	Interactions of Hyaluronic Acid with the Skin and Implications for the Dermal Delivery of Biomacromolecules. Molecular Pharmaceutics, 2015, 12, 1391-1401.	4.6	97
59	Stimulation of PPAR $\alpha$ 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
60	Scalable Synthesis of Human Ultralong Chain Ceramides. Organic Letters, 2015, 17, 5456-5459.	4.6	26
61	Tetrazole regioisomers in the development of nitro group-containing antitubercular agents. MedChemComm, 2015, 6, 174-181.	3.4	40
62	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
63	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
64	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
65	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
66	Transdermal Delivery and Cutaneous Targeting of Antivirals using a Penetration Enhancer and Lysolipid Prodrugs. Pharmaceutical Research, 2014, 31, 1071-1081.	3.5	19
67	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
68	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
69	The Chemistry and Biology of 6 $\alpha$ -Hydroxyceramide, the Youngest Member of the Human Sphingolipid Family. ChemBioChem, 2014, 15, 1555-1562.	2.6	21
70	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
71	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
72	Mathematical calculations of iron complex stoichiometry by direct UV-Vis spectrophotometry. Bioorganic Chemistry, 2013, 49, 1-8.	4.1	25

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73	One-pot synthesis of 1-substituted-5-alkylselenanyl-1 H -tetrazoles from isoselenocyanates: unexpected formation of N -alkyl- N -arylcyanamides and ( Z )- Se -alkyl- N -cyano- N , N -diarylisoselenoureas. <i>Tetrahedron</i> , 2013, 69, 8798-8808.	1.9	22
74	Amino acid derivatives as transdermal permeation enhancers. <i>Journal of Controlled Release</i> , 2013, 165, 91-100.	9.9	37
75	Ceramides in the Skin Lipid Membranes: Length Matters. <i>Langmuir</i> , 2013, 29, 15624-15633.	3.5	101
76	Synthesis and Functionalization of 5-Substituted Tetrazoles. <i>European Journal of Organic Chemistry</i> , 2012, 2012, 6101-6118.	2.4	236
77	LC-MS/MS identification of the principal in vitro and in vivo phase I metabolites of the novel thiosemicarbazone anti-cancer drug, Bp4eT. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 403, 309-321.	3.7	16
78	Methyl and ethyl ketone analogs of salicylaldehyde isonicotinoyl hydrazone: Novel iron chelators with selective antiproliferative action. <i>Chemico-Biological Interactions</i> , 2012, 197, 69-79.	4.0	41
79	Effect of ceramide acyl chain length on skin permeability and thermotropic phase behavior of model stratum corneum lipid membranes. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2011, 1811, 129-137.	2.4	69
80	Complex modulation of peptidolytic activity of cathepsin D by sphingolipids. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2011, 1811, 1097-1104.	2.4	11
81	Comparison of various iron chelators used in clinical practice as protecting agents against catecholamine-induced oxidative injury and cardiotoxicity. <i>Toxicology</i> , 2011, 289, 122-131.	4.2	35
82	Ammonium carbamates as highly active transdermal permeation enhancers with a dual mechanism of action. <i>Journal of Controlled Release</i> , 2011, 150, 164-170.	9.9	29
83	New fluorine-containing hydrazones active against MDR-tuberculosis. <i>European Journal of Medicinal Chemistry</i> , 2011, 46, 4937-4945.	5.5	57
84	Synthesis and Initial <i>in Vitro</i> Evaluations of Novel Antioxidant Aroylhydrazone Iron Chelators with Increased Stability against Plasma Hydrolysis. <i>Chemical Research in Toxicology</i> , 2011, 24, 290-302.	3.3	52
85	Enhanced Topical and Transdermal Delivery of Antineoplastic and Antiviral Acyclic Nucleoside Phosphonate cPr-PMEDAP. <i>Pharmaceutical Research</i> , 2011, 28, 3105-3115.	3.5	10
86	Hydrophilic interaction liquid chromatography in the separation of a moderately lipophilic drug from its highly polar metabolites—the cardioprotectant dexrazoxane as a model case. <i>Journal of Chromatography A</i> , 2011, 1218, 416-426.	3.7	18
87	One-pot regioselective vinylation of tetrazoles: preparation of 5-substituted 2-vinyl-2H-tetrazoles. <i>Tetrahedron Letters</i> , 2010, 51, 1411-1414.	1.4	10
88	Salicylanilide carbamates: Antitubercular agents active against multidrug-resistant <i>Mycobacterium tuberculosis</i> strains. <i>Bioorganic and Medicinal Chemistry</i> , 2010, 18, 1054-1061.	3.0	38
89	Transcarbams as transdermal permeation enhancers: Effects of ester position and ammonium carbamate formation. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2010, 20, 2726-2728.	2.2	8
90	Comparison of Clinically Used and Experimental Iron Chelators for Protection against Oxidative Stress-Induced Cellular Injury. <i>Chemical Research in Toxicology</i> , 2010, 23, 1105-1114.	3.3	61

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91	Practical Synthesis of 5-Substituted Tetrazoles under Microwave Irradiation. <i>Synthesis</i> , 2009, 2009, 2175-2178.	2.3	45
92	Dimethylamino Acid Esters as Biodegradable and Reversible Transdermal Permeation Enhancers: Effects of Linking Chain Length, Chirality and Polyfluorination. <i>Pharmaceutical Research</i> , 2009, 26, 811-821.	3.5	31
93	Dicarboxylic acid esters as transdermal permeation enhancers: Effects of chain number and geometric isomers. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2009, 19, 344-347.	2.2	14
94	Synthesis of fluorescent C24-ceramide: Evidence for acyl chain length dependent differences in penetration of exogenous NBD-ceramides into human skin. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2009, 19, 6975-6977.	2.2	29
95	HPLC-DAD and MS/MS analysis of novel drug candidates from the group of aromatic hydrazones revealing the presence of geometric isomers. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2008, 48, 295-302.	2.8	23
96	Transkarbams with terminal branching as transdermal permeation enhancers. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2008, 18, 1712-1715.	2.2	11
97	Transdermal and dermal delivery of adefovir: Effects of pH and permeation enhancers. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2008, 69, 597-604.	4.3	34
98	Permeation enhancer dodecyl 6-(dimethylamino)hexanoate increases transdermal and topical delivery of adefovir: Influence of pH, ion-pairing and skin species. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2008, 70, 901-907.	4.3	21
99	HPLC method for determination of in vitro delivery through and into porcine skin of adefovir (PMEA). <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2007, 853, 198-203.	2.3	21
100	Synthesis and transdermal permeation-enhancing activity of carbonate and carbamate analogs of Transkarbam 12. <i>Bioorganic and Medicinal Chemistry</i> , 2006, 14, 7671-7680.	3.0	18
101	Synthesis and transdermal penetration-enhancing activity of carbonic and carbamic acid esters—Comparison with transkarbam 12. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2006, 16, 1981-1984.	2.2	14
102	Synthesis and transdermal permeation-enhancing activity of ketone, amide, and alkane analogs of Transkarbam 12. <i>Bioorganic and Medicinal Chemistry</i> , 2006, 14, 2896-2903.	3.0	15
103	Influence of terminal branching on the transdermal permeation-enhancing activity in fatty alcohols and acids. <i>Bioorganic and Medicinal Chemistry</i> , 2006, 14, 7681-7687.	3.0	29
104	Thermotropic phase behavior of long-chain alkylammonium-alkylcarbamates. <i>Thermochimica Acta</i> , 2006, 441, 116-123.	2.7	20
105	Synthesis and Enhancing Effect of Transkarbam 12 on the Transdermal Delivery of Theophylline, Clotrimazole, Flobufen, and Griseofulvin. <i>Pharmaceutical Research</i> , 2006, 23, 912-919.	3.5	31
106	Biodegradable derivatives of tranexamic acid as transdermal permeation enhancers. <i>Journal of Controlled Release</i> , 2005, 104, 41-49.	9.9	36
107	Esters of 6-aminohexanoic acid as skin permeation enhancers: The effect of branching in the alkanol moiety. <i>Journal of Pharmaceutical Sciences</i> , 2005, 94, 1494-1499.	3.3	18
108	Ceramide analogue 14S24 ((S)-2-tetracosanoylamino-3-hydroxypropionic acid tetradecyl ester) is effective in skin barrier repair in vitro. <i>European Journal of Pharmaceutical Sciences</i> , 2004, 21, 581-587.	4.0	23

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109	Chromatographic methods for the separation of biocompatible iron chelators from their synthetic precursors and iron chelates. <i>Journal of Separation Science</i> , 2004, 27, 1503-1510.	2.5	12
110	A simple method for the preparation of 5-alkylsulfinyl-1-aryltetrazoles. <i>Tetrahedron Letters</i> , 2004, 45, 7955-7957.	1.4	17
111	Synthetic ceramide analogues as skin permeation enhancers: structure–Activity relationships. <i>Bioorganic and Medicinal Chemistry</i> , 2003, 11, 5381-5390.	3.0	39
112	L-Serine and glycine based ceramide analogues as transdermal permeation enhancers: polar head size and hydrogen bonding. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2003, 13, 2351-2353.	2.2	38