Zrinka Kovarik

List of Publications by Year
in descending order

77 papers	2,498 citations	201674 27 h-index	214800 47 g-index
79 all docs	79 docs citations	79 times ranked	1450 citing authors

#	Article	IF	Citations
1	Structural aspects of flavonoids as inhibitors of human butyrylcholinesterase. European Journal of Medicinal Chemistry, 2010, 45, 186-192.	5.5	154
2	In vitro and in vivo evaluation of pyridinium oximes: Mode of interaction with acetylcholinesterase, effect on tabun- and soman-poisoned mice and their cytotoxicity. Toxicology, 2006, 219, 85-96.	4.2	124
3	New Structural Scaffolds for Centrally Acting Oxime Reactivators of Phosphylated Cholinesterases. Journal of Biological Chemistry, 2011, 286, 19422-19430.	3.4	110
4	Acetylcholinesterase active centre and gorge conformations analysed by combinatorial mutations and enantiomeric phosphonates. Biochemical Journal, 2003, 373, 33-40.	3.7	108
5	Mutant Cholinesterases Possessing Enhanced Capacity for Reactivation of Their Phosphonylated Conjugatesâ€. Biochemistry, 2004, 43, 3222-3229.	2.5	105
6	Limitation of the Ellman method: Cholinesterase activity measurement in the presence of oximes. Analytical Biochemistry, 2007, 370, 223-227.	2.4	103
7	Refinement of Structural Leads for Centrally Acting Oxime Reactivators of Phosphylated Cholinesterases. Journal of Biological Chemistry, 2012, 287, 11798-11809.	3.4	97
8	Catalytic detoxification of nerve agent and pesticide organophosphates by butyrylcholinesterase assisted with non-pyridinium oximes. Biochemical Journal, 2013, 450, 231-242.	3.7	73
9	Evaluation of Oxime K203 as Antidote in Tabun Poisoning. Arhiv Za Higijenu Rada I Toksikologiju, 2009, 60, 19-26.	0.7	67
10	Centrally acting oximes in reactivation of tabun-phosphoramidated AChE. Chemico-Biological Interactions, 2013, 203, 77-80.	4.0	64
11	Pseudo-catalytic scavenging: Searching for a suitable reactivator of phosphorylated butyrylcholinesterase. Chemico-Biological Interactions, 2010, 187, 167-171.	4.0	53
12	Pretreatment with pyridinium oximes improves antidotal therapy against tabun poisoning. Toxicology, 2006, 228, 41-50.	4.2	51
13	Potent 3â€Hydroxyâ€2â€Pyridine Aldoxime Reactivators of Organophosphateâ€Inhibited Cholinesterases with Predicted Bloodâ€“Brain Barrier Penetration. Chemistry - A European Journal, 2018, 24, 9675-9691.	3.3	50
14	Oxime-assisted Acetylcholinesterase Catalytic Scavengers of Organophosphates That Resist Aging. Journal of Biological Chemistry, 2011, 286, 29718-29724.	3.4	49
15	Pyridinium Oximes with Ortho-Positioned Chlorine Moiety Exhibit Improved Physicochemical Properties and Efficient Reactivation of Human Acetylcholinesterase Inhibited by Several Nerve Agents. Journal of Medicinal Chemistry, 2018, 61, 10753-10766.	6.4	45
16	para- andortho-Pyridinium aldoximes in reaction with acetylthiocholine. FEBS Letters, 2006, 580, 3167-3172.	2.8	44
17	Evaluation of monoquaternary pyridinium oximes potency to reactivate tabun-inhibited human acetylcholinesterase. Toxicology, 2007, 233, 85-96.	4.2	44
18	Catalytic Soman Scavenging by the Y337A/F338A Acetylcholinesterase Mutant Assisted with Novel Site-Directed Aldoximes. Chemical Research in Toxicology, 2015, 28, 1036-1044.	3.3	41

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19	A comprehensive evaluation of novel oximes in creation of butyrylcholinesterase-based nerve agent bioscavengers. Toxicology and Applied Pharmacology, 2016, 310, 195-204.	2.8	40
20	Mutation of acetylcholinesterase to enhance oxime-assisted catalytic turnover of methylphosphonates. Toxicology, 2007, 233, 79-84.	4.2	37
21	Oximes: Reactivators of phosphorylated acetylcholinesterase and antidotes in therapy against tabun poisoning. Chemico-Biological Interactions, 2008, 175, 173-179.	4.0	37
22	Metaproterenol, Isoproterenol, and Their Bisdimethylcarbamate Derivatives as Human Cholinesterase Inhibitors. Journal of Medicinal Chemistry, 2012, 55, 6716-6723.	6.4	37
23	Pharmacology, Pharmacokinetics, and Tissue Disposition of Zwitterionic Hydroxyiminoacetamido Alkylamines as Reactivating Antidotes for Organophosphate Exposure. Journal of Pharmacology and Experimental Therapeutics, 2018, 367, 363-372.	2.5	35
24	Preparative HPLC separation of bambuterol enantiomers and stereoselective inhibition of human cholinesterases. Analytical and Bioanalytical Chemistry, 2006, 385, 1513-1519.	3.7	32
25	Mechanism of interaction of novel uncharged, centrally active reactivators with OP-hAChE conjugates. Chemico-Biological Interactions, 2013, 203, 67-71.	4.0	30
26	Amino acid residues involved in the interaction of acetylcholinesterase and butyrylcholinesterase with the carbamates Ro 02-0683 and bambuterol, and with terbutaline. BBA - Proteins and Proteomics, 1999, 1433, 261-271.	2.1	29
27	Active site mutant acetylcholinesterase interactions with 2-PAM, HI-6, and DDVP. Biochemical and Biophysical Research Communications, 2006, 342, 973-978.	2.1	29
28	Interactions of pyridinium oximes with acetylcholinesterase. Chemico-Biological Interactions, 2010, 187, 172-176.	4.0	28
29	Oxime-assisted reactivation of tabun-inhibited acetylcholinesterase analysed by active site mutations. Toxicology, 2018, 406-407, 104-113.	4.2	28
30	Interactions of butane, but-2-ene or xylene-like linked bispyridinium para-aldoximes with native and tabun-inhibited human cholinesterases. Chemico-Biological Interactions, 2008, 175, 305-308.	4.0	27
31	Design and synthesis of N-substituted-2-hydroxyiminoacetamides and interactions with cholinesterases. Chemico-Biological Interactions, 2016, 259, 122-132.	4.0	27
32	Assessment of four organophosphorus pesticides as inhibitors of human acetylcholinesterase and butyrylcholinesterase. Scientific Reports, 2021, 11, 21486.	3.3	27
33	Structure-Activity Approach in the Reactivation of Tabun-Phosphorylated Human Acetylcholinesterase with Bispyridinium para-Aldoximes. Arhiv Za Higijenu Rada I Toksikologiju, 2007, 58, 201-209.	0.7	26
34	Acetylcholinesterase: Converting a vulnerable target to a template for antidotes and detection of inhibitor exposure. Toxicology, 2007, 233, 70-78.	4.2	26
35	Mechanism of stereoselective interaction between butyrylcholinesterase and ethopropazine enantiomers. Biochimie, 2011, 93, 1797-1807.	2.6	26
36	Structural aspects of 4-aminoquinolines as reversible inhibitors of human acetylcholinesterase and butyrylcholinesterase. Chemico-Biological Interactions, 2019, 308, 101-109.	4.0	26

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37	Butyrylcholinesterase inhibited by nerve agents is efficiently reactivated with chlorinated pyridinium oximes. Chemico-Biological Interactions, 2019, 307, 16-20.	4.0	26
38	Stereoselective inhibition of human, mouse, and horse cholinesterases by bambuterol enantiomers. Chemico-Biological Interactions, 2008, 175, 192-195.	4.0	25
39	The estimation of oxime efficiency is affected by the experimental design of phosphylated acetylcholinesterase reactivation. Toxicology Letters, 2018, 293, 222-228.	0.8	25
40	Advice on assistance and protection provided by the Scientific Advisory Board of the Organisation for the Prohibition of Chemical Weapons: Part 1. On medical care and treatment of injuries from nerve agents. Toxicology, 2019, 415, 56-69.	4.2	25
41	Pharmacokinetic Evaluation of Brain Penetrating Morpholine-3-hydroxy-2-pyridine Oxime as an Antidote for Nerve Agent Poisoning. ACS Chemical Neuroscience, 2020, 11, 1072-1084.	3.5	25
42	New Cinchona Oximes Evaluated as Reactivators of Acetylcholinesterase and Butyrylcholinesterase Inhibited by Organophosphorus Compounds. Molecules, 2017, 22, 1234.	3.8	24
43	Design and evaluation of selective butyrylcholinesterase inhibitors based on Cinchona alkaloid scaffold. PLoS ONE, 2018, 13, e0205193.	2.5	24
44	Reversal of Tabun Toxicity Enabled by a Triazoleâ€Annulated Oxime Libraryâ€"Reactivators of Acetylcholinesterase. Chemistry - A European Journal, 2019, 25, 4100-4114.	3.3	24
45	Interaction of Human Butyrylcholinesterase Variants with Bambuterol and Terbutaline. Journal of Enzyme Inhibition and Medicinal Chemistry, 2004, 19, 113-117.	5.2	23
46	Advice on assistance and protection by the Scientific Advisory Board of the Organisation for the Prohibition of Chemical Weapons: Part 2. On preventing and treating health effects from acute, prolonged, and repeated nerve agent exposure, and the identification of medical countermeasures able to reduce or eliminate the longer term health effects of nerve agents. Toxicology, 2019, 413, 13-23.	4.2	23
47	Translation of in vitro to in vivo pyridinium oxime potential in tabun poisoning / Translacija uÄinkovitosti piridinijevih oksima kod trovanja tabunom iz in vitro sustava u in vivo primjenu. Arhiv Za Higijenu Rada I Toksikologiju, 2015, 66, 291-298.	0.7	21
48	Targeting organophosphorus compounds poisoning by novel quinuclidine-3 oximes: development of butyrylcholinesterase-based bioscavengers. Archives of Toxicology, 2020, 94, 3157-3171.	4.2	21
49	HI-6 assisted catalytic scavenging of VX by acetylcholinesterase choline binding site mutants. Chemico-Biological Interactions, 2016, 259, 148-153.	4.0	20
50	Reversible inhibition of acetylcholinesterase and butyrylcholinesterase by 4,4â€²-bipyridine and by a coumarin derivative. Chemico-Biological Interactions, 1999, 119-120, 119-128.	4.0	19
51	Assessment of ionizable, zwitterionic oximes as reactivating antidotal agents for organophosphate exposure. Chemico-Biological Interactions, 2019, 308, 194-197.	4.0	18
52	Counteracting poisoning with chemical warfare nerve agents. Arhiv Za Higijenu Rada I Toksikologiju, 2020, 71, 266-284.	0.7	18
53	Synthesis and evaluation of novel analogues of vitamin B6 as reactivators of tabun and paraoxon inhibited acetylcholinesterase. Chemico-Biological Interactions, 2010, 187, 234-237.	4.0	16
54	Advice from the Scientific Advisory Board of the Organisation for the Prohibition of Chemical Weapons on isotopically labelled chemicals and stereoisomers in relation to the Chemical Weapons Convention. Pure and Applied Chemistry, 2018, 90, 1647-1670.	1.9	15

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55	Pyridoxal oxime derivative potency to reactivate cholinesterases inhibited by organophosphorus compounds. Toxicology Letters, 2016, 262, 114-122.	0.8	14
56	Resorcinol-, catechol- and saligenin-based bronchodilating Î²2-agonists as inhibitors of human cholinesterase activity. Journal of Enzyme Inhibition and Medicinal Chemistry, 2017, 32, 789-797.	5.2	14
57	Peripheral site and acyl pocket define selective inhibition of mouse butyrylcholinesterase by two biscarbamates. Archives of Biochemistry and Biophysics, 2013, 529, 140-145.	3.0	13
58	Evaluation of high-affinity phenyltetrahydroisoquinoline aldoximes, linked through anti-triazoles, as reactivators of phosphylated cholinesterases. Toxicology Letters, 2020, 321, 83-89.	0.8	13
59	Enantioseparation, in vitro testing, and structural characterization of triple-binding reactivators of organophosphate-inhibited cholinesterases. Biochemical Journal, 2020, 477, 2771-2790.	3.7	12
60	Design, synthesis and cholinesterase inhibitory properties of new oxazole benzylamine derivatives. Journal of Enzyme Inhibition and Medicinal Chemistry, 2020, 35, 460-467.	5.2	11
61	Amino acid residues involved in stereoselective inhibition of cholinesterases with bambuterol. Archives of Biochemistry and Biophysics, 2008, 471, 72-76.	3.0	10
62	Reactivation of Tabun-inhibited Acetylcholinesterase Investigated by Two Oximes and Mutagenesis. Croatica Chemica Acta, 2012, 85, 209-212.	0.4	10
63	In vivo experimental approach to treatment against tabun poisoning. Journal of Enzyme Inhibition and Medicinal Chemistry, 2010, 25, 531-536.	5.2	9
64	Efficient detoxification of nerve agents by oxime-assisted reactivation of acetylcholinesterase mutants. Neuropharmacology, 2020, 171, 108111.	4.1	9
65	Application of Recombinant DNA Methods for Production of Cholinesterases as Organophosphate Antidotes and Detectors. Arhiv Za Higijenu Rada I Toksikologiju, 2007, 58, 339-345.	0.7	8
66	Counteracting tabun inhibition by reactivation by pyridinium aldoximes that interact with active center gorge mutants of acetylcholinesterase. Toxicology and Applied Pharmacology, 2019, 372, 40-46.	2.8	8
67	Advice on assistance and protection provided by the Scientific Advisory Board of the Organisation for the Prohibition of Chemical Weapons: Part 3. On medical care and treatment of injuries from sulfur mustard. Toxicology, 2021, 463, 152967.	4.2	7
68	An explanation for the different inhibitory characteristics of human serum butyrylcholinesterase phenotypes deriving from inhibition of atypical heterozygotes. Chemico-Biological Interactions, 1999, 119-120, 159-164.	4.0	5
69	Ligand design for human acetylcholinesterase and nicotinic acetylcholine receptors, extending beyond the conventional and canonical. Journal of Neurochemistry, 2021, 158, 1217-1222.	3.9	5
70	New Uncharged 2-Thienostilbene Oximes as Reactivators of Organophosphate-Inhibited Cholinesterases. Pharmaceuticals, 2021, 14, 1147.	3.8	5
71	Benzobicyclo[3.2.1]octene Derivatives as a New Class of Cholinesterase Inhibitors. Molecules, 2020, 25, 4872.	3.8	4
72	(42) Structure-inhibition relationships in the interaction of butyrylcholinesterase with bambuterol, haloxon and their leaving groups. Chemico-Biological Interactions, 2005, 157-158, 421-423.	4.0	3

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73	Halogen substituents enhance oxime nucleophilicity for reactivation of cholinesterases inhibited by nerve agents. European Journal of Medicinal Chemistry, 2022, 238, 114377.	5.5	3
74	(24) Acetylcholinesterase mutantsâ€"oxime-assisted catalytic scavengers of organophosphonates. Chemico-Biological Interactions, 2005, 157-158, 388-390.	4.0	2
75	Interaction of Pyridinium Oximes With Acetylcholinesterase and Their Effect on Organophosphate-Poisoned Mice. Journal of Molecular Neuroscience, 2006, 30, 113-114.	2.3	2
76	An improvement in segregation of human butyrylcholinesterase phenotypes having the fluoride-resistant variants. Arhiv Za Higijenu Rada I Toksikologiju, 2003, 54, 239-44.	0.7	2
77	Natural deep eutectic solvents improve the solubility of acetylcholinesterase reactivator RS194B. Sustainable Chemistry and Pharmacy, 2022, 27, 100654.	3.3	0