

Takaaki Akaike

List of Publications by Year in descending order

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116
papers

7,578
citations

66343

42
h-index

54911

84
g-index

121
all docs

121
docs citations

121
times ranked

6508
citing authors

#	ARTICLE	IF	CITATIONS
1	Chemical Biology of Reactive Sulfur Species: Hydrolysis-Driven Equilibrium of Polysulfides as a Determinant of Physiological Functions. <i>Antioxidants and Redox Signaling</i> , 2022, 36, 327-336.	5.4	30
2	Redox-dependent internalization of the purinergic P2Y ₆ receptor limits colitis progression. <i>Science Signaling</i> , 2022, 15, eabj0644.	3.6	12
3	What triggers inflammation in COVID-19?. <i>ELife</i> , 2022, 11, .	6.0	5
4	Regulation of nitric oxide/reactive oxygen species redox signaling by nNOS splicing variants. <i>Nitric Oxide - Biology and Chemistry</i> , 2022, 120, 44-52.	2.7	2
5	Subtilase cytotoxin from Shiga-toxigenic <i>Escherichia coli</i> impairs the inflammasome and exacerbates enteropathogenic bacterial infection. <i>IScience</i> , 2022, 25, 104050.	4.1	5
6	High-Precision Sulfur Metabolomics Innovated by a New Specific Probe for Trapping Reactive Sulfur Species. <i>Antioxidants and Redox Signaling</i> , 2021, 34, 1407-1419.	5.4	24
7	Cysteine Hydropersulfide Inactivates β -Lactam Antibiotics with Formation of Ring-Opened Carbothioic S-Acids in Bacteria. <i>ACS Chemical Biology</i> , 2021, 16, 731-739.	3.4	16
8	Comment on "Evidence that the ProPerDP method is inadequate for protein persulfidation detection due to lack of specificity". <i>Science Advances</i> , 2021, 7, .	10.3	3
9	Sulfide catabolism ameliorates hypoxic brain injury. <i>Nature Communications</i> , 2021, 12, 3108.	12.8	71
10	On-tissue polysulfide visualization by surface-enhanced Raman spectroscopy benefits patients with ovarian cancer to predict post-operative chemosensitivity. <i>Redox Biology</i> , 2021, 41, 101926.	9.0	20
11	ATP exposure stimulates glutathione efflux as a necessary switch for NLRP3 inflammasome activation. <i>Redox Biology</i> , 2021, 41, 101930.	9.0	26
12	Methods in sulfide and persulfide research. <i>Nitric Oxide - Biology and Chemistry</i> , 2021, 116, 47-64.	2.7	22
13	Loss of cell wall integrity genes <i>cpxA</i> and <i>mrcB</i> causes flocculation in <i>Escherichia coli</i> . <i>Biochemical Journal</i> , 2021, 478, 41-59.	3.7	5
14	Antioxidative and anti-inflammatory actions of reactive cysteine persulfides. <i>Journal of Clinical Biochemistry and Nutrition</i> , 2021, 68, 5-8.	1.4	20
15	Reprogrammed transsulfuration promotes basal-like breast tumor progression via realigning cellular cysteine persulfidation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	36
16	Virucidal effect of monogalactosyl diacylglyceride from a green microalga, <i>Coccomyxa</i> sp. KJ, against clinical isolates of SARS-CoV-2 as assessed by a plaque assay. <i>Journal of Clinical Laboratory Analysis</i> , 2021, , e24146.	2.1	5
17	Long-lasting blood pressure lowering effects of nitrite are NO-independent and mediated by hydrogen peroxide, persulfides, and oxidation of protein kinase G1 α redox signalling. <i>Cardiovascular Research</i> , 2020, 116, 51-62.	3.8	31
18	Control of protein function through oxidation and reduction of persulfidated states. <i>Science Advances</i> , 2020, 6, eaax8358.	10.3	121

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19	Glutathione Trisulfide Prevents Lipopolysaccharide-induced Inflammatory Gene Expression in Retinal Pigment Epithelial Cells. <i>Ocular Immunology and Inflammation</i> , 2020, , 1-12.	1.8	8
20	Enzymatic Regulation and Biological Functions of Reactive Cysteine Persulfides and Polysulfides. <i>Biomolecules</i> , 2020, 10, 1245.	4.0	38
21	Measuring Reactive Sulfur Species and Thiol Oxidation States: Challenges and Cautions in Relation to Alkylation-Based Protocols. <i>Antioxidants and Redox Signaling</i> , 2020, 33, 1174-1189.	5.4	22
22	8-Nitro-cGMP modulates exocytosis in adrenal chromaffin cells. <i>Biochemical and Biophysical Research Communications</i> , 2020, 526, 225-230.	2.1	3
23	Speciation of reactive sulfur species and their reactions with alkylating agents: do we have any clue about what is present inside the cell?. <i>British Journal of Pharmacology</i> , 2019, 176, 646-670.	5.4	100
24	The reaction of hydrogen sulfide with disulfides: formation of a stable trisulfide and implications for biological systems. <i>British Journal of Pharmacology</i> , 2019, 176, 671-683.	5.4	73
25	Persulfide synthases that are functionally coupled with translation mediate sulfur respiration in mammalian cells. <i>British Journal of Pharmacology</i> , 2019, 176, 607-615.	5.4	38
26	Depolysulfidation of Drp1 induced by low-dose methylmercury exposure increases cardiac vulnerability to hemodynamic overload. <i>Science Signaling</i> , 2019, 12, .	3.6	25
27	Mitochondrial cysteinyl-tRNA synthetase is expressed via alternative transcriptional initiation regulated by energy metabolism in yeast cells. <i>Journal of Biological Chemistry</i> , 2019, 294, 13781-13788.	3.4	16
28	Titelbild: Data-Driven Identification of Hydrogen Sulfide Scavengers (<i>Angew. Chem.</i> 32/2019). <i>Angewandte Chemie</i> , 2019, 131, 10877-10877.	2.0	0
29	AUTACs: Cargo-Specific Degradors Using Selective Autophagy. <i>Molecular Cell</i> , 2019, 76, 797-810.e10.	9.7	319
30	Rational Design of a Dual-Responsivity-Based Fluorescent Probe for Visualizing Intracellular HSNO. <i>Angewandte Chemie</i> , 2019, 131, 16213-16216.	2.0	10
31	Rational Design of a Dual-Responsivity-Based Fluorescent Probe for Visualizing Intracellular HSNO. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 16067-16070.	13.8	41
32	The Uptake and Release of Polysulfur Cysteine Species by Cells: Physiological and Toxicological Implications. <i>Chemical Research in Toxicology</i> , 2019, 32, 447-455.	3.3	28
33	Data-Driven Identification of Hydrogen Sulfide Scavengers. <i>Angewandte Chemie</i> , 2019, 131, 11014-11018.	2.0	4
34	Environmental Electrophile-Mediated Toxicity in Mice Lacking Nrf2, CSE, or Both. <i>Environmental Health Perspectives</i> , 2019, 127, 67002.	6.0	30
35	Oxidation of PKGI \pm mediates an endogenous adaptation to pulmonary hypertension. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 13016-13025.	7.1	12
36	Nitrosative stress in patients with asthma-chronic obstructive pulmonary disease overlap. <i>Journal of Allergy and Clinical Immunology</i> , 2019, 144, 972-983.e14.	2.9	22

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37	Data-Driven Identification of Hydrogen Sulfide Scavengers. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 10898-10902.	13.8	43
38	Distribution of Polysulfide in Human Biological Fluids and Their Association with Amylase and Sperm Activities. <i>Molecules</i> , 2019, 24, 1689.	3.8	15
39	Sulfur-utilizing cytoprotection and energy metabolism. <i>Current Opinion in Physiology</i> , 2019, 9, 1-8.	1.8	8
40	The active-site cysteine residue of Ca ²⁺ /calmodulin-dependent protein kinase I is protected from irreversible modification via generation of polysulfidation. <i>Nitric Oxide - Biology and Chemistry</i> , 2019, 86, 68-75.	2.7	13
41	Enhanced Cellular Polysulfides Negatively Regulate TLR4 Signaling and Mitigate Lethal Endotoxin Shock. <i>Cell Chemical Biology</i> , 2019, 26, 686-698.e4.	5.2	64
42	8-Nitro-cGMP attenuates context-dependent fear memory in mice. <i>Biochemical and Biophysical Research Communications</i> , 2019, 511, 141-147.	2.1	5
43	Production of 8-nitro-cGMP in osteocytic cells and its upregulation by parathyroid hormone and prostaglandin E2. <i>In Vitro Cellular and Developmental Biology - Animal</i> , 2019, 55, 45-51.	1.5	6
44	Polysulfide stabilization by tyrosine and hydroxyphenyl-containing derivatives that is important for a reactive sulfur metabolomics analysis. <i>Redox Biology</i> , 2019, 21, 101096.	9.0	55
45	SNAP-25 S-Guanylation and SNARE Complex Formation. <i>Methods in Molecular Biology</i> , 2019, 1860, 163-173.	0.9	1
46	Involvement of nitric oxide/reactive oxygen species signaling via 8-nitro-cGMP formation in 1-methyl-4-phenylpyridinium ion-induced neurotoxicity in PC12 cells and rat cerebellar granule neurons. <i>Biochemical and Biophysical Research Communications</i> , 2018, 495, 2165-2170.	2.1	10
47	Cysteine perthiosulfenic acid (Cys-SSOH): A novel intermediate in thiol-based redox signaling?. <i>Redox Biology</i> , 2018, 14, 379-385.	9.0	56
48	Important Role of Endothelial Caveolin-1 in the Protective Role of Endothelium-dependent Hyperpolarization Against Nitric Oxide-Mediated Nitritative Stress in Microcirculation in Mice. <i>Journal of Cardiovascular Pharmacology</i> , 2018, 71, 113-126.	1.9	20
49	8-Nitro-cGMP is a promoter of osteoclast differentiation induced by RANKL. <i>Nitric Oxide - Biology and Chemistry</i> , 2018, 72, 46-51.	2.7	10
50	8-Nitro-cGMP Attenuates the Interaction between SNARE Complex and Complexin through S-Guanylation of SNAP-25. <i>ACS Chemical Neuroscience</i> , 2018, 9, 217-223.	3.5	8
51	Reactive Persulfides from <i>Salmonella Typhimurium</i> Downregulate Autophagy-Mediated Innate Immunity in Macrophages by Inhibiting Electrophilic Signaling. <i>Cell Chemical Biology</i> , 2018, 25, 1403-1413.e4.	5.2	28
52	Reactive Cysteine Persulphides: Occurrence, Biosynthesis, Antioxidant Activity, Methodologies, and Bacterial Persulphide Signalling. <i>Advances in Microbial Physiology</i> , 2018, 72, 1-28.	2.4	25
53	Biological hydropersulfides and related polysulfides – a new concept and perspective in redox biology. <i>FEBS Letters</i> , 2018, 592, 2140-2152.	2.8	164
54	Redox regulation of electrophilic signaling by reactive persulfides in cardiac cells. <i>Free Radical Biology and Medicine</i> , 2017, 109, 132-140.	2.9	26

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55	1,4-Naphthoquinone activates the HSP90/HSF1 pathway through the S-arylation of HSP90 in A431 cells: Negative regulation of the redox signal transduction pathway by persulfides/polysulfides. <i>Free Radical Biology and Medicine</i> , 2017, 104, 118-128.	2.9	21
56	Superoxide generation from nNOS splice variants and its potential involvement in redox signal regulation. <i>Biochemical Journal</i> , 2017, 474, 1149-1162.	3.7	16
57	Metabolomic profiling of reactive persulfides and polysulfides in the aqueous and vitreous humors. <i>Scientific Reports</i> , 2017, 7, 41984.	3.3	50
58	Synthesis of L-cysteine derivatives containing stable sulfur isotopes and application of this synthesis to reactive sulfur metabolome. <i>Free Radical Biology and Medicine</i> , 2017, 106, 69-79.	2.9	18
59	Chemical Biology of Hydropersulfides and Related Species: Possible Roles in Cellular Protection and Redox Signaling. <i>Antioxidants and Redox Signaling</i> , 2017, 27, 622-633.	5.4	51
60	8-Nitro-cGMP promotes bone growth through expansion of growth plate cartilage. <i>Free Radical Biology and Medicine</i> , 2017, 110, 63-71.	2.9	15
61	Quantitative determination of polysulfide in albumins, plasma proteins and biological fluid samples using a novel combined assays approach. <i>Analytica Chimica Acta</i> , 2017, 969, 18-25.	5.4	33
62	Cysteinyl-tRNA synthetase governs cysteine polysulfidation and mitochondrial bioenergetics. <i>Nature Communications</i> , 2017, 8, 1177.	12.8	373
63	Exposure to Electrophiles Impairs Reactive Persulfide-Dependent Redox Signaling in Neuronal Cells. <i>Chemical Research in Toxicology</i> , 2017, 30, 1673-1684.	3.3	39
64	Production of reactive persulfide species in chronic obstructive pulmonary disease. <i>Thorax</i> , 2017, 72, 1074-1083.	5.6	54
65	Reactive sulfur species inactivate Ca ²⁺ /calmodulin-dependent protein kinase IV via S-polysulfidation of its active-site cysteine residue. <i>Biochemical Journal</i> , 2017, 474, 2547-2562.	3.7	14
66	Reactive sulfur species regulate tRNA methylation and contribute to insulin secretion. <i>Nucleic Acids Research</i> , 2017, 45, 435-445.	14.5	99
67	Synthesis and Characterization of 8-Nitroguanosine 3',5'-Cyclic Monophosphorothioate Rp-Isomer as a Potent Inhibitor of Protein Kinase G1 β . <i>Biological and Pharmaceutical Bulletin</i> , 2017, 40, 365-374.	1.4	8
68	Regulation of Redox Signaling by a Nitrated Nucleotide and Reactive Cysteine Persulfides. , 2017, , 231-235.		1
69	Redox signaling regulated by electrophiles and reactive sulfur species. <i>Journal of Clinical Biochemistry and Nutrition</i> , 2016, 58, 91-98.	1.4	41
70	Redox Signaling Regulated by Cysteine Persulfide and Protein Polysulfidation. <i>Molecules</i> , 2016, 21, 1721.	3.8	71
71	Redox signaling regulated by an electrophilic cyclic nucleotide and reactive cysteine persulfides. <i>Archives of Biochemistry and Biophysics</i> , 2016, 595, 140-146.	3.0	18
72	Modification of Tau by 8-Nitroguanosine 3',5'-Cyclic Monophosphate (8-Nitro-cGMP). <i>Journal of Biological Chemistry</i> , 2016, 291, 22714-22720.	3.4	19

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73	Endogenous occurrence of protein S-guanylation in Escherichia coli: Target identification and genetic regulation. <i>Biochemical and Biophysical Research Communications</i> , 2016, 478, 7-11.	2.1	7
74	Protein polysulfidation-dependent persulfide dioxygenase activity of ethylmalonic encephalopathy protein 1. <i>Biochemical and Biophysical Research Communications</i> , 2016, 480, 180-186.	2.1	39
75	Proposal of <i>Helicobacter canicola</i> sp. nov., previously identified as <i>Helicobacter cinaedi</i> , isolated from canines. <i>Systematic and Applied Microbiology</i> , 2016, 39, 307-312.	2.8	20
76	The chemical biology of protein hydropersulfides: Studies of a possible protective function of biological hydropersulfide generation. <i>Free Radical Biology and Medicine</i> , 2016, 97, 136-147.	2.9	94
77	Persistent Activation of cGMP-Dependent Protein Kinase by a Nitrated Cyclic Nucleotide via Site Specific Protein S-Guanylation. <i>Biochemistry</i> , 2016, 55, 751-761.	2.5	25
78	The Development of Fluorescent Probes for Visualizing Intracellular Hydrogen Polysulfides. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 13961-13965.	13.8	165
79	Thiosulfate Mediates Cytoprotective Effects of Hydrogen Sulfide Against Neuronal Ischemia. <i>Journal of the American Heart Association</i> , 2015, 4, .	3.7	72
80	8-Mercapto-Cyclic GMP Mediates Hydrogen Sulfide-Induced Stomatal Closure in Arabidopsis. <i>Plant and Cell Physiology</i> , 2015, 56, 1481-1489.	3.1	84
81	The chemical biology of hydropersulfides (RSSH): Chemical stability, reactivity and redox roles. <i>Archives of Biochemistry and Biophysics</i> , 2015, 588, 15-24.	3.0	65
82	Hyperhomocysteinemia abrogates fasting-induced cardioprotection against ischemia/reperfusion by limiting bioavailability of hydrogen sulfide anions. <i>Journal of Molecular Medicine</i> , 2015, 93, 879-889.	3.9	42
83	Involvement of Reactive Persulfides in Biological Dimethylmercury Sulfide Formation. <i>Chemical Research in Toxicology</i> , 2015, 28, 1301-1306.	3.3	67
84	Reactive Sulfur Species-Mediated Activation of the Keap1-Nrf2 Pathway by 1,2-Naphthoquinone through Sulfenic Acids Formation under Oxidative Stress. <i>Chemical Research in Toxicology</i> , 2015, 28, 838-847.	3.3	24
85	Formation of Sulfur Adducts of N-Acetyl-p-benzoquinoneimine, an Electrophilic Metabolite of Acetaminophen in Vivo: Participation of Reactive Persulfides. <i>Chemical Research in Toxicology</i> , 2015, 28, 1796-1802.	3.3	23
86	8-Nitro-cGMP Enhances SNARE Complex Formation through S-Guanylation of Cys90 in SNAP25. <i>ACS Chemical Neuroscience</i> , 2015, 6, 1715-1725.	3.5	22
87	Mesenchymal Stem Cells Correct Inappropriate Epithelial-mesenchyme Relation in Pulmonary Fibrosis Using Stanniocalcin-1. <i>Molecular Therapy</i> , 2015, 23, 549-560.	8.2	85
88	SIRT7 Controls Hepatic Lipid Metabolism by Regulating the Ubiquitin-Proteasome Pathway. <i>Cell Metabolism</i> , 2014, 19, 712-721.	16.2	173
89	Reactive cysteine persulfides and S-polythiolation regulate oxidative stress and redox signaling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 7606-7611.	7.1	757
90	S-Guanylation Proteomics for Redox-Based Mitochondrial Signaling. <i>Antioxidants and Redox Signaling</i> , 2014, 20, 295-307.	5.4	26

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91	Redox chemistry and chemical biology of H ₂ S, hydropersulfides, and derived species: Implications of their possible biological activity and utility. <i>Free Radical Biology and Medicine</i> , 2014, 77, 82-94.	2.9	340
92	Clinical and bacteriological characteristics of <i>Helicobacter cinaedi</i> infection. <i>Journal of Infection and Chemotherapy</i> , 2014, 20, 517-526.	1.7	96
93	Redox signal regulation via nNOS phosphorylation at Ser847 in PC12 cells and rat cerebellar granule neurons. <i>Biochemical Journal</i> , 2014, 459, 251-263.	3.7	29
94	Promotion of atherosclerosis by <i>Helicobacter cinaedi</i> infection that involves macrophage-driven proinflammatory responses. <i>Scientific Reports</i> , 2014, 4, 4680.	3.3	43
95	Endogenous Nitrated Nucleotide Is a Key Mediator of Autophagy and Innate Defense against Bacteria. <i>Molecular Cell</i> , 2013, 52, 794-804.	9.7	96
96	Formation, signaling functions, and metabolisms of nitrated cyclic nucleotide. <i>Nitric Oxide - Biology and Chemistry</i> , 2013, 34, 10-18.	2.7	55
97	Regulation of redox signalling by an electrophilic cyclic nucleotide. <i>Journal of Biochemistry</i> , 2013, 153, 131-138.	1.7	28
98	Redox Signaling by 8-Nitro-cyclic Guanosine Monophosphate: Nitric Oxide- and Reactive Oxygen Species-Derived Electrophilic Messenger. <i>Antioxidants and Redox Signaling</i> , 2013, 19, 1236-1246.	5.4	18
99	Complete Genome Sequence of <i>Helicobacter cinaedi</i> Strain PAGU611, Isolated in a Case of Human Bacteremia. <i>Journal of Bacteriology</i> , 2012, 194, 3744-3745.	2.2	25
100	Regulation by mitochondrial superoxide and NADPH oxidase of cellular formation of nitrated cyclic GMP: potential implications for ROS signalling. <i>Biochemical Journal</i> , 2012, 441, 719-730.	3.7	61
101	Hydrogen sulfide anion regulates redox signaling via electrophile sulfhydration. <i>Nature Chemical Biology</i> , 2012, 8, 714-724.	8.0	274
102	Detoxification of Methylmercury by Hydrogen Sulfide-Producing Enzyme in Mammalian Cells. <i>Chemical Research in Toxicology</i> , 2011, 24, 1633-1635.	3.3	73
103	The Critical Role of Nitric Oxide Signaling, via Protein S-Guanylation and Nitrated Cyclic GMP, in the Antioxidant Adaptive Response. <i>Journal of Biological Chemistry</i> , 2010, 285, 23970-23984.	3.4	135
104	Cell signaling mediated by nitrated cyclic guanine nucleotide. <i>Nitric Oxide - Biology and Chemistry</i> , 2010, 23, 166-174.	2.7	48
105	Regulation of Redox Signaling Involving Chemical Conjugation of Protein Thiols by Nitric Oxide and Electrophiles. <i>Bioconjugate Chemistry</i> , 2010, 21, 1121-1129.	3.6	38
106	Cytoprotective Function of Heme Oxygenase 1 Induced by a Nitrated Cyclic Nucleotide Formed during Murine Salmonellosis. <i>Journal of Immunology</i> , 2009, 182, 3746-3756.	0.8	57
107	<i>Helicobacter cinaedi</i> Cellulitis and Bacteremia in Immunocompetent Hosts after Orthopedic Surgery. <i>Journal of Clinical Microbiology</i> , 2007, 45, 31-38.	3.9	93
108	Protein S-guanylation by the biological signal 8-nitroguanosine 3',5'-cyclic monophosphate. <i>Nature Chemical Biology</i> , 2007, 3, 727-735.	8.0	249

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109	Nitrative stress in respiratory inflammation caused by influenza virus infection. <i>Clinical and Experimental Allergy Reviews</i> , 2007, 7, 19-26.	0.3	3
110	8-Nitroguanosine formation in viral pneumonia and its implication for pathogenesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 685-690.	7.1	161
111	Electron Spin Resonance Detection of Hydrogen Peroxide as an Endothelium-Derived Hyperpolarizing Factor in Porcine Coronary Microvessels. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2003, 23, 1224-1230.	2.4	153
112	Generation of Lipid Peroxyl Radicals from Oxidized Edible Oils and Heme-Iron: Suppression of DNA Damage by Unrefined Oils and Vegetable Extracts. <i>ACS Symposium Series</i> , 2002, , 282-300.	0.5	0
113	Nitric oxide and virus infection. <i>Immunology</i> , 2000, 101, 300-308.	4.4	307
114	Direct Evidence of in Vivo Nitric Oxide Production and Inducible Nitric Oxide Synthase mRNA Expression in the Brain of Living Rat during Experimental Meningitis. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1999, 19, 1175-1178.	4.3	19
115	Alkylperoxyl Radical-Scavenging Activity of Various Flavonoids and Other Phenolic Compounds:Â Implications for the Anti-Tumor-Promoter Effect of Vegetables. <i>Journal of Agricultural and Food Chemistry</i> , 1999, 47, 397-402.	5.2	293
116	Dependence on O2- generation by xanthine oxidase of pathogenesis of influenza virus infection in mice.. <i>Journal of Clinical Investigation</i> , 1990, 85, 739-745.	8.2	319