Hisashi Hemmi

List of Publications by Year
in descending order

105 papers	2,353 citations	212478 28 h-index	299063 42 g-index
106 all docs	106 docs citations	106 times ranked	2444 citing authors

#	Article	IF	Citations
1	Mechanism of Pyridoxine 5â€²-Phosphate Accumulation in Pyridoxal 5â€²-Phosphate-Binding Protein Deficiency. Journal of Bacteriology, 2022, 204, JB0052121.	1.0	5
2	Identification and biochemical characterization of a heteromeric <i>cis</i>-prenyltransferase from the thermophilic archaeon <i>Archaeoglobus fulgidus</i>. Journal of Biochemistry, 2022, 171, 641-651.	0.9	1
3	Identification and functional analysis of a new type of <i>Z,E</i>â€mixed prenyl reductase from mycobacteria. FEBS Journal, 2022, 289, 4981-4997.	2.2	1
4	Identification and characterization of a serine racemase in the silkworm <i>Bombyx mori.</i>. Journal of Biochemistry, 2022, , .	0.9	2
5	Isopentenyl diphosphate/dimethylallyl diphosphate-specific Nudix hydrolase from the methanogenic archaeon <i>Methanosarcina mazei</i>. Bioscience, Biotechnology and Biochemistry, 2022, 86, 246-253.	0.6	0
6	Crystal structure of mevalonate 3,5-bisphosphate decarboxylase reveals insight into the evolution of decarboxylases in the mevalonate metabolic pathways. Journal of Biological Chemistry, 2022, 298, 102111.	1.6	3
7	A versatile cis-prenyltransferase from Methanosarcina mazei catalyzes both C- and O-prenylations. Journal of Biological Chemistry, 2021, 296, 100679.	1.6	4
8	Urinary <scp>l</scp>-<i>erythro</i>-Î²-hydroxyasparagineâ€"a novel serine racemase inhibitor and substrate of the Zn2+-dependent <scp>d</scp>-serine dehydratase. Bioscience Reports, 2021, 41, .	1.1	1
9	Total Synthesis and Structure Confirmation of <i>trans</i>-Anhydromevalonate-5-phosphate, a Key Biosynthetic Intermediate of the Archaeal Mevalonate Pathway. Journal of Natural Products, 2021, 84, 2749-2754.	1.5	4
10	Inhibition of glycine cleavage system by pyridoxine 5â€²â€phosphate causes synthetic lethality inglyA yggSandserA yggSinEscherichia coli. Molecular Microbiology, 2020, 113, 270-284.	1.2	19
11	Construction of an artificial biosynthetic pathway for hyperextended archaeal membrane lipids in the bacterium Escherichia coli. Synthetic Biology, 2020, 5, ysaa018.	1.2	0
12	Mechanism of eukaryotic serine racemase-catalyzed serine dehydration. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2020, 1868, 140460.	1.1	3
13	Reconstruction of the â€œArchaealâ€• Mevalonate Pathway from the Methanogenic Archaeon Methanosarcina mazei in Escherichia coli Cells. Applied and Environmental Microbiology, 2020, 86, .	1.4	19
14	A heteromeric cis-prenyltransferase is responsible for the biosynthesis of glycosyl carrier lipids in Methanosarcina mazei. Biochemical and Biophysical Research Communications, 2019, 520, 291-296.	1.0	10
15	Conserved Pyridoxal 5'-Phosphate-Binding Protein YggS Impacts Amino Acid Metabolism through Pyridoxine 5'-Phosphate in <i>Escherichia coli</i>. Applied and Environmental Microbiology, 2019, 85, .	1.4	26
16	Conversion of Mevalonate 3-Kinase into 5-Phosphomevalonate 3-Kinase by Single Amino Acid Mutations. Applied and Environmental Microbiology, 2019, 85, .	1.4	6
17	Production of Ophthalmic Acid Using Engineered Escherichia coli. Applied and Environmental Microbiology, 2018, 84, .	1.4	8
18	Biosynthetic machinery for C25,C25-diether archaeal lipids from the hyperthermophilic archaeon Aeropyrum pernix. Biochemical and Biophysical Research Communications, 2018, 497, 87-92.	1.0	4

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19	Utilization of an intermediate of the methylerythritol phosphate pathway, (E)-4-hydroxy-3-methylbut-2-en-1-yl diphosphate, as the prenyl donor substrate for various prenyltransferases. Bioscience, Biotechnology and Biochemistry, 2018, 82, 993-1002.	0.6	0
20	Modified mevalonate pathway of the archaeon <i>Aeropyrum pernix</i> proceeds via <i>trans</i> -anhydromevalonate 5-phosphate. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10034-10039.	3.3	39
21	D-Serine Metabolism and Its Importance in Development of Dictyostelium discoideum. Frontiers in Microbiology, 2018, 9, 784.	1.5	6
22	A Single Amino Acid Mutation Converts (R)-5-Diphosphomevalonate Decarboxylase into a Kinase. Journal of Biological Chemistry, 2017, 292, 2457-2469.	1.6	11
23	Identification of enzymes involved in the mevalonate pathway of Flavobacterium johnsoniae. Biochemical and Biophysical Research Communications, 2017, 487, 702-708.	1.0	15
24	Occurrence of the (2R,3S)-Isomer of 2-Amino-3,4-dihydroxybutanoic Acid in the MushroomHypsizygus marmoreus. Journal of Agricultural and Food Chemistry, 2017, 65, 6131-6139.	2.4	5
25	A <i>cis</i>â€prenyltransferase from <i>Methanosarcina acetivorans</i> catalyzes both headâ€toâ€tail and nonheadâ€toâ€tail prenyl condensation. FEBS Journal, 2016, 283, 2369-2383.	2.2	18
26	Ophthalmic acid accumulation in an Escherichia coli mutant lacking the conserved pyridoxal 5â€²-phosphate-binding protein YggS. Journal of Bioscience and Bioengineering, 2016, 122, 689-693.	1.1	19
27	A new member of MocR/GabRâ€type <scp>PLP</scp>â€binding regulator of <scp>d</scp>â€alanylâ€<scp>d</scp>â€alanine ligase in <i>BrevibacillusÂbrevis</i>. FEBS Journal, 2015, 282, 4201-4217.	2.2	21
28	PEGylated d-serine dehydratase as a d-serine reducing agent. Journal of Pharmaceutical and Biomedical Analysis, 2015, 116, 34-39.	1.4	1
29	Domain characterization of<i>Bacillus subtilis</i>GabR, a pyridoxal 5â€²-phosphate-dependent transcriptional regulator. Journal of Biochemistry, 2015, 158, 225-234.	0.9	22
30	A highly selective biosynthetic pathway to non-natural C50 carotenoids assembled from moderately selective enzymes. Nature Communications, 2015, 6, 7534.	5.8	61
31	A phytoene desaturase homolog gene from the methanogenic archaeon Methanosarcina acetivorans is responsible for hydroxyarchaeol biosynthesis. Biochemical and Biophysical Research Communications, 2015, 466, 186-191.	1.0	5
32	<i>In Vivo</i> Formation of the Protein Disulfide Bond That Enhances the Thermostability of Diphosphomevalonate Decarboxylase, an Intracellular Enzyme from the Hyperthermophilic Archaeon Sulfolobus solfataricus. Journal of Bacteriology, 2015, 197, 3463-3471.	1.0	4
33	Role of the aminotransferase domain in <scp><i>B</i></scp><i>acillus subtilis</i>â€…<scp>GabR</scp>, a pyridoxal 5â€²â€phosphateâ€dependent transcriptional regulator. Molecular Microbiology, 2015, 95, 245-257.	1.2	30
34	(R)-Mevalonate 3-Phosphate Is an Intermediate of the Mevalonate Pathway in Thermoplasma acidophilum. Journal of Biological Chemistry, 2014, 289, 15957-15967.	1.6	40
35	Reaction mechanism of Zn2+-dependent d-serine dehydratase: role of a conserved tyrosine residue interacting with pyridine ring nitrogen of pyridoxal 5â€²-phosphate. Journal of Biochemistry, 2014, 156, 173-180.	0.9	3
36	A novel geranylgeranyl reductase from the methanogenic archaeon <i><scp>M</scp>ethanosarcinaÂacetivorans</i> displays unique regiospecificity. FEBS Journal, 2014, 281, 3165-3176.	2.2	14

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37	Geranylgeranyl Reductase and Ferredoxin from Methanosarcina acetivorans Are Required for the Synthesis of Fully Reduced Archaeal Membrane Lipid in Escherichia coli Cells. Journal of Bacteriology, 2014, 196, 417-423.	1.0	32
38	Catalytic mechanism of serine racemase from Dictyostelium discoideum. Amino Acids, 2013, 44, 1073-1084.	1.2	22
39	Substrate specificity of undecaprenyl diphosphate synthase from the hyperthermophilic archaeon Aeropyrum pernix. Biochemical and Biophysical Research Communications, 2013, 436, 230-234.	1.0	9
40	Biochemical evidence supporting the presence of the classical mevalonate pathway in the thermoacidophilic archaeon Sulfolobus solfataricus. Journal of Biochemistry, 2013, 153, 415-420.	0.9	29
41	Conserved Pyridoxal Protein That Regulates Ile and Val Metabolism. Journal of Bacteriology, 2013, 195, 5439-5449.	1.0	49
42	Enzymatic Assay for<scp>D</scp>-Aspartic Acid Using<scp>D</scp>-Aspartate Oxidase and Oxaloacetate Decarboxylase. Bioscience, Biotechnology and Biochemistry, 2012, 76, 2150-2152.	0.6	9
43	Lysine racemase from a lactic acid bacterium, Oenococcus oeni: structural basis of substrate specificity. Journal of Biochemistry, 2012, 152, 505-508.	0.9	21
44	Quantitative analyses of the behavior of exogenously added bacteria during an acidulocomposting process. Journal of Bioscience and Bioengineering, 2012, 114, 70-72.	1.1	2
45	Substrate-Induced Change in the Quaternary Structure of Type 2 Isopentenyl Diphosphate Isomerase from Sulfolobus shibatae. Journal of Bacteriology, 2012, 194, 3216-3224.	1.0	10
46	Metal ion dependency of serine racemase from Dictyostelium discoideum. Amino Acids, 2012, 43, 1567-1576.	1.2	21
47	Archaeal Phospholipid Biosynthetic Pathway Reconstructed in<i>Escherichia coli</i>. Archaea, 2012, 2012, 1-9.	2.3	19
48	Role of zinc ion for catalytic activity in <scp>d</scp>â€serine dehydratase from <i>Saccharomycesâ€ƒcerevisiae</i>. FEBS Journal, 2012, 279, 612-624.	2.2	14
49	Connected cavity structure enables prenyl elongation across the dimer interface in mutated geranylfarnesyl diphosphate synthase from Methanosarcina mazei. Biochemical and Biophysical Research Communications, 2011, 409, 333-337.	1.0	4
50	Simultaneous determination of d-amino acids by the coupling method of d-amino acid oxidase with high-performance liquid chromatography. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2011, 879, 3190-3195.	1.2	22
51	Structure and Mutation Analysis of Archaeal Geranylgeranyl Reductase. Journal of Molecular Biology, 2011, 409, 543-557.	2.0	35
52	Alterations in d-amino acid concentrations and microbial community structures during the fermentation of red and white wines. Journal of Bioscience and Bioengineering, 2011, 111, 104-108.	1.1	53
53	Covalent modification of reduced flavin mononucleotide in type-2 isopentenyl diphosphate isomerase by active-site-directed inhibitors. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20461-20466.	3.3	25
54	ã‚¢ãƒ¼ã‚ã‚¢ã«ãŠã‘ã‚‹è†œè„‚è³ªç”Ÿåˆæˆé…µç´ å¦çš„è¦–ç‚¹ã‹ã‚‰. Kagaku To Seibutsu, 2010, 48, 614-621.	0.0	0

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55	A highly sensitive enzymatic assay for d- and total serine detection using d-serine dehydratase from Saccharomyces cerevisiae. Journal of Molecular Catalysis B: Enzymatic, 2010, 67, 150-154.	1.8	8
56	Biochemical Analysis of a Novel Lipolytic Enzyme YvdO fromBacillus subtilis168. Bioscience, Biotechnology and Biochemistry, 2010, 74, 701-706.	0.6	8
57	Mevalonate Pathway in Bacteria and Archaea. , 2010, , 493-516.		14
58	<i>Bacillus subtilis</i>Spore Coat Protein LipC Is a Phospholipase B. Bioscience, Biotechnology and Biochemistry, 2010, 74, 24-30.	0.6	12
59	Geranylfarnesyl diphosphate synthase from Methanosarcina mazei: Different role, different evolution. Biochemical and Biophysical Research Communications, 2010, 393, 16-20.	1.0	29
60	The Implication of YggT of<i>Escherichia coli</i>in Osmotic Regulation. Bioscience, Biotechnology and Biochemistry, 2009, 73, 2698-2704.	0.6	30
61	New Role of Flavin as a General Acid-Base Catalyst with No Redox Function in Type 2 Isopentenyl-diphosphate Isomerase. Journal of Biological Chemistry, 2009, 284, 9160-9167.	1.6	42
62	Effect of mutagenesis at the region upstream from the G(Q/E) motif of three types of geranylgeranyl diphosphate synthase on product chain-length. Journal of Bioscience and Bioengineering, 2009, 107, 235-239.	1.1	4
63	Physiological role of carbon dioxide in spore germination of Clostridium perfringens S40. Journal of Bioscience and Bioengineering, 2009, 108, 477-483.	1.1	5
64	Polymerase chain reaction-denaturing gradient gel electrophoresis analysis of microbial community structure in landfill leachate. Journal of Hazardous Materials, 2009, 164, 1503-1508.	6.5	11
65	The product chain length determination mechanism of type II geranylgeranyl diphosphate synthase requires subunit interaction. FEBS Journal, 2008, 275, 3921-3933.	2.2	19
66	A novel zinc-dependent <scp>D</scp>-serine dehydratase from <i>Saccharomyces cerevisiae</i>. Biochemical Journal, 2008, 409, 399-406.	1.7	50
67	Specific Partial Reduction of Geranylgeranyl Diphosphate by an Enzyme from the Thermoacidophilic Archaeon <i>Sulfolobus acidocaldarius</i> Yields a Reactive Prenyl Donor, Not a Dead-End Product. Journal of Bacteriology, 2008, 190, 3923-3929.	1.0	29
68	Structural and Kinetic Evidence for an Extended Hydrogen-bonding Network in Catalysis of Methyl Group Transfer. Journal of Biological Chemistry, 2007, 282, 6609-6618.	1.6	39
69	A Novel Lipolytic Enzyme, YcsK (LipC), Located in the Spore Coat of Bacillus subtilis , Is Involved in Spore Germination. Journal of Bacteriology, 2007, 189, 2369-2375.	1.0	20
70	Enzymatic assay of d-serine using d-serine dehydratase from Saccharomyces cerevisiae. Analytical Biochemistry, 2007, 371, 167-172.	1.1	37
71	Geranylgeranyl reductase involved in the biosynthesis of archaeal membrane lipids in the hyperthermophilic archaeon Archaeoglobus fulgidus. FEBS Journal, 2007, 274, 805-814.	2.2	29
72	Total Synthesis of Geranylgeranylglyceryl Phosphate Enantiomers:â€‰ Substrates for Characterization of 2,3-O-Digeranylgeranylglyceryl Phosphate Synthase. Organic Letters, 2006, 8, 943-946.	2.4	13

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73	Microbial diversity in biodegradation and reutilization processes of garbage. Journal of Bioscience and Bioengineering, 2005, 99, 1-11.	1.1	48
74	UDP-glucuronic Acid:Anthocyanin Glucuronosyltransferase from Red Daisy (Bellis perennis) Flowers. Journal of Biological Chemistry, 2005, 280, 899-906.	1.6	108
75	Menaquinone-Specific Prenyl Reductase from the Hyperthermophilic Archaeon Archaeoglobus fulgidus. Journal of Bacteriology, 2005, 187, 1937-1944.	1.0	25
76	Microbacterium natoriense sp. nov., a novel d-aminoacylase-producing bacterium isolated from soil in Natori, Japan. International Journal of Systematic and Evolutionary Microbiology, 2005, 55, 661-665.	0.8	25
77	(S)-2,3-Di-O-geranylgeranylglyceryl Phosphate Synthase from the Thermoacidophilic Archaeon Sulfolobus solfataricus. Journal of Biological Chemistry, 2004, 279, 50197-50203.	1.6	60
78	Type 2 isopentenyl diphosphate isomerase from a thermoacidophilic archaeonSulfolobus shibatae. FEBS Journal, 2004, 271, 1087-1093.	0.2	33
79	Molecular biological analysis of microflora in a garbage treatment process under thermoacidophilic conditions. Journal of Bioscience and Bioengineering, 2004, 97, 119-126.	1.1	25
80	Molecular cloning and characterization of a thermostable carboxylesterase from an archaeon, Sulfolobus shibatae DSM5389: Non-linear kinetic behavior of a hormone-sensitive lipase family enzyme. Journal of Bioscience and Bioengineering, 2004, 98, 445-451.	1.1	26
81	Catalytic mechanism of type 2 isopentenyl diphosphate:dimethylallyl diphosphate isomerase: verification of a redox role of the flavin cofactor in a reaction with no net redox change. Biochemical and Biophysical Research Communications, 2004, 322, 905-910.	1.0	40
82	Introduction of the archaebacterial geranylgeranyl pyrophosphate synthase gene into Chlamydomonas reinhardtii chloroplast. Journal of Bioscience and Bioengineering, 2003, 95, 283-287.	1.1	25
83	An alternative mechanism of product chain-length determination in type III geranylgeranyl diphosphate synthase. FEBS Journal, 2003, 270, 2186-2194.	0.2	49
84	Altering the substrate chain-length specificity of an Î±-glucosidase. Biochemical and Biophysical Research Communications, 2003, 304, 684-690.	1.0	10
85	Fusion-type lycopene Î²-cyclase from a thermoacidophilic archaeon Sulfolobus solfataricus. Biochemical and Biophysical Research Communications, 2003, 305, 586-591.	1.0	41
86	Collagenolytic Serine-Carboxyl Proteinase from Alicyclobacillus sendaiensis Strain NTAP-1: Purification, Characterization, Gene Cloning, and Heterologous Expression. Applied and Environmental Microbiology, 2003, 69, 162-169.	1.4	52
87	Alicyclobacillus sendaiensis sp. nov., a novel acidophilic, slightly thermophilic species isolated from soil in Sendai, Japan. International Journal of Systematic and Evolutionary Microbiology, 2003, 53, 1081-1084.	0.8	67
88	Deciphering the Molecular Basis of the Broad Substrate Specificity of Â-Glucosidase from Bacillus sp. SAM1606. Journal of Biochemistry, 2003, 134, 543-550.	0.9	16
89	Novel Medium-Chain Prenyl Diphosphate Synthase from the Thermoacidophilic Archaeon <i>Sulfolobus solfataricus</i>. Journal of Bacteriology, 2002, 184, 615-620.	1.0	31
90	Change of product specificity of hexaprenyl diphosphate synthase from Sulfolobus solfataricus by introducing mimetic mutations. Biochemical and Biophysical Research Communications, 2002, 297, 1096-1101.	1.0	8

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91	Site-specific mutagenesis at positions 272 and 273 of the Bacillus sp. SAM1606 Î±-glucosidase to screen mutants with altered specificity for oligosaccharide production by transglucosylation. Journal of Molecular Catalysis B: Enzymatic, 2002, 16, 265-274.	1.8	15
92	Dramatic changes in the substrate specificities of prenyltransferase by a single amino acid substitution. Journal of Molecular Catalysis B: Enzymatic, 2002, 19-20, 431-436.	1.8	2
93	Novel sugar phosphotransferase system applicable to the efficient labeling of the compounds synthesized via the non-mevalonate pathway in Escherichia coli. Journal of Bioscience and Bioengineering, 2002, 93, 515-518.	1.1	2
94	Deletion and insertion of a 192-residue peptide in the active-site domain of glycosyl hydrolase family-2 Î²-galactosidases. Journal of Bioscience and Bioengineering, 2002, 93, 575-583.	1.1	0
95	Novel Sugar Phosphotransferase System Applicable to the Efficient Labeling of the Compounds Synthesized via the Non-Mevalonate Pathway in Escherichia coli.. Journal of Bioscience and Bioengineering, 2002, 93, 515-518.	1.1	0
96	Cloning, Expression, and Characterization of cis -Polyprenyl Diphosphate Synthase from the Thermoacidophilic Archaeon Sulfolobus acidocaldarius. Journal of Bacteriology, 2001, 183, 401-404.	1.0	31
97	An active-site mutation causes enhanced reactivity and altered regiospecificity of transglucosylation catalyzed by the Bacillus sp. SAM1606 Î±-glucosidase. Journal of Bioscience and Bioengineering, 2000, 89, 431-437.	1.1	12
98	Zinc biosorption by a zinc-resistant bacterium, Brevibacterium sp. strain HZM-1. Applied Microbiology and Biotechnology, 2000, 54, 581-588.	1.7	69
99	The role of histidine-114 ofSulfolobus acidocaldariusgeranylgeranyl diphosphate synthase in chain-length determination. FEBS Letters, 2000, 481, 68-72.	1.3	6
100	Overexpression of an Archaeal Geranylgeranyl Diphosphate Synthase inEscherichia coliCells. Bioscience, Biotechnology and Biochemistry, 1998, 62, 1243-1246.	0.6	17
101	Identification of Genes Affecting Lycopene Formation in Escherichia coli Transformed with Carotenoid Biosynthetic Genes: Candidates for Early Genes in Isoprenoid Biosynthesis. Journal of Biochemistry, 1998, 123, 1088-1096.	0.9	40
102	Recognition of Allylic Substrates in Sulfolobus acidocaldarius Geranylgeranyl Diphosphate Synthase: Analysis Using Mutated Enzymes and Artificial Allylic Substrates. Journal of Biochemistry, 1998, 123, 1036-1040.	0.9	11
103	Effects of Random Mutagenesis in a Putative Substrate-Binding Domain of Geranylgeranyl Diphosphate Synthase upon Intermediate Formation and Substrate Specificity. Journal of Biochemistry, 1997, 121, 696-704.	0.9	11
104	Conversion from Farnesyl Diphosphate Synthase to Geranylgeranyl Diphosphate Synthase by Random Chemical Mutagenesis. Journal of Biological Chemistry, 1996, 271, 10087-10095.	1.6	127
105	Conversion of Product Specificity of Archaebacterial Geranylgeranyl-diphosphate Synthase. Journal of Biological Chemistry, 1996, 271, 18831-18837.	1.6	114