Fumitaka Kudo

List of Publications by Year in descending order

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95	2,574	159585	233421
papers	citations	30 h-index	45 g-index

100	100	100	2118
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Structural Insight into the Reaction Mechanism of Ketosynthase-Like Decarboxylase in a Loading Module of Modular Polyketide Synthases. ACS Chemical Biology, 2022, 17, 198-206.	3.4	10
2	Characterization of the cobalamin-dependent radical S-adenosyl-l-methionine enzyme C-methyltransferase Fom3 in fosfomycin biosynthesis. Methods in Enzymology, 2022, , 45-70.	1.0	0
3	Biosynthesis of cyclitols. Natural Product Reports, 2022, 39, 1622-1642.	10.3	3
4	One-pot enzymatic synthesis of 2-deoxy-scyllo-inosose from <scp>d</scp>-glucose and polyphosphate. Bioscience, Biotechnology and Biochemistry, 2021, 85, 108-114.	1.3	2
5	Stepwise Postâ€glycosylation Modification of Sugar Moieties in Kanamycin Biosynthesis. ChemBioChem, 2021, 22, 1668-1675.	2.6	3
6	Mutational Biosynthesis of Hitachimycin Analogs Controlled by the Î²-Amino Acidâ€“Selective Adenylation Enzyme HitB. ACS Chemical Biology, 2021, 16, 539-547.	3.4	7
7	Complex structure of the acyltransferase VinK and the carrier protein VinL with a pantetheine cross-linking probe. Acta Crystallographica Section F, Structural Biology Communications, 2021, 77, 294-302.	0.8	6
8	Biochemical and Mutational Analysis of Radical S-Adenosyl-L-Methionine Adenosylhopane Synthase HpnH from Zymomonas mobilis Reveals that the Conserved Residue Cysteine-106 Reduces a Radical Intermediate and Determines the Stereochemistry. Biochemistry, 2021, 60, 2865-2874.	2.5	3
9	Biosynthesis of Aminoglycoside Antibiotics. , 2020, , 588-612.		5
10	Characterization of Radical SAM Adenosylhopane Synthase, HpnH, which Catalyzes the 5 â€² â€Deoxyadenosyl Radical Addition to Diploptene in the Biosynthesis of C 35 Bacteriohopanepolyols. Angewandte Chemie - International Edition, 2020, 59, 237-241.	13.8	23
11	Characterization of Radical SAM Adenosylhopane Synthase, HpnH, which Catalyzes the 5 â€² â€Deoxyadenosyl Radical Addition to Diploptene in the Biosynthesis of C 35 Bacteriohopanepolyols. Angewandte Chemie, 2020, 132, 243-247.	2.0	2
12	C-Methylation of S-adenosyl-L-Methionine Occurs Prior to Cyclopropanation in the Biosynthesis of 1-Amino-2-Methylcyclopropanecarboxylic Acid (Norcoronamic Acid) in a Bacterium. Biomolecules, 2020, 10, 775.	4.0	11
13	Generation of incednine derivatives by mutasynthesis. Journal of Antibiotics, 2020, 73, 794-797.	2.0	2
14	Structural Characterization of Complex of Adenylation Domain and Carrier Protein by Using Pantetheine Cross-Linking Probe. ACS Chemical Biology, 2020, 15, 1808-1812.	3.4	17
15	Biochemical and Structural Analysis of a Dehydrogenase, KanD2, and an Aminotransferase, KanS2, That Are Responsible for the Construction of the Kanosamine Moiety in Kanamycin Biosynthesis. Biochemistry, 2020, 59, 1470-1473.	2.5	5
16	Total Synthesis of Actinorhodin. Angewandte Chemie - International Edition, 2019, 58, 4264-4270.	13.8	29
17	Structural Analysis of the Glycine Oxidase Homologue CmiS2 Reveals a Unique Substrate Recognition Mechanism for Formation of a Î²-Amino Acid Starter Unit in Cremimycin Biosynthesis. Biochemistry, 2019, 58, 2706-2709.	2.5	6
18	Rapamycin directly activates lysosomal mucolipin TRP channels independent of mTOR. PLoS Biology, 2019, 17, e3000252.	5.6	70

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19	Functional Characterization of 3â€Aminobenzoic Acid Adenylation Enzyme PctU and UDPâ€Nâ€Acetylâ€<scp>d</scp>â€Glucosamine: 3â€Aminobenzoylâ€ACP Glycosyltransferase PctL in Pactamycin Biosynthesis. ChemBioChem, 2019, 20, 2458-2462.	2.6	11
20	Functional and structural characterization of IdnL7, an adenylation enzyme involved in incednine biosynthesis. Acta Crystallographica Section F, Structural Biology Communications, 2019, 75, 299-306.	0.8	8
21	An Engineered Aryl Acid Adenylation Domain with an Enlarged Substrate Binding Pocket. Angewandte Chemie - International Edition, 2019, 58, 6906-6910.	13.8	15
22	An Engineered Aryl Acid Adenylation Domain with an Enlarged Substrate Binding Pocket. Angewandte Chemie, 2019, 131, 6980-6984.	2.0	0
23	Functional and Structural Analyses of the Split-Dehydratase Domain in the Biosynthesis of Macrolactam Polyketide Cremimycin. Biochemistry, 2019, 58, 4799-4803.	2.5	5
24	Stereochemistry in the Reaction of the myo-Inositol Phosphate Synthase Ortholog Ari2 during Aristeromycin Biosynthesis. Biochemistry, 2019, 58, 5112-5116.	2.5	5
25	Structural basis of the nonribosomal codes for nonproteinogenic amino acid selective adenylation enzymes in the biosynthesis of natural products. Journal of Industrial Microbiology and Biotechnology, 2019, 46, 515-536.	3.0	44
26	Carbon-free production of 2-deoxy-scyllo-inosose (DOI) in cyanobacterium Synechococcus elongatus PCC 7942. Bioscience, Biotechnology and Biochemistry, 2018, 82, 161-165.	1.3	6
27	NAD⁺â€Dependent Dehydrogenase PctP and Pyridoxal 5â€²â€Phosphate Dependent Aminotransferase PctC Catalyze the First Postglycosylation Modification of the Sugar Intermediate in Pactamycin Biosynthesis. ChemBioChem, 2018, 19, 126-130.	2.6	8
28	C-Methylation Catalyzed by Fom3, a Cobalamin-Dependent Radical S-adenosyl-<scp>l</scp>-methionine Enzyme in Fosfomycin Biosynthesis, Proceeds with Inversion of Configuration. Biochemistry, 2018, 57, 4963-4966.	2.5	24
29	Proteinâ€“protein interactions in polyketide synthaseâ€“nonribosomal peptide synthetase hybrid assembly lines. Natural Product Reports, 2018, 35, 1185-1209.	10.3	73
30	Biochemical and Structural Analysis of FomD That Catalyzes the Hydrolysis of Cytidylyl (S)-2-Hydroxypropylphosphonate in Fosfomycin Biosynthesis. Biochemistry, 2018, 57, 4858-4866.	2.5	11
31	Structural Basis of Proteinâ€“Protein Interactions between a trans-Acting Acyltransferase and Acyl Carrier Protein in Polyketide Disorazole Biosynthesis. Journal of the American Chemical Society, 2018, 140, 7970-7978.	13.7	40
32	Identification of a gene cluster for telomestatin biosynthesis and heterologous expression using a specific promoter in a clean host. Scientific Reports, 2017, 7, 3382.	3.3	23
33	Structural analysis of the dual-function thioesterase SAV606 unravels the mechanism of Michael addition of glycine to an Î±,Î²-unsaturated thioester. Journal of Biological Chemistry, 2017, 292, 10926-10937.	3.4	20
34	Biochemical characterization and structural insight into aliphatic Î²â€amino acid adenylation enzymes IdnL1 and CmiS6. Proteins: Structure, Function and Bioinformatics, 2017, 85, 1238-1247.	2.6	21
35	Substrate Recognition by a Dualâ€Function P450 Monooxygenase GfsF Involved in FDâ€891 Biosynthesis. ChemBioChem, 2017, 18, 2179-2187.	2.6	14
36	Fosfomycin Biosynthesis via Transient Cytidylylation of 2-Hydroxyethylphosphonate by the Bifunctional Fom1 Enzyme. ACS Chemical Biology, 2017, 12, 2209-2215.	3.4	16

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37	Methylcobalamin-Dependent Radical SAM C-Methyltransferase Fom3 Recognizes Cytidylyl-2-hydroxyethylphosphonate and Catalyzes the Nonstereoselective C-Methylation in Fosfomycin Biosynthesis. Biochemistry, 2017, 56, 3519-3522.	2.5	41
38	Substrate specificity of radical S-adenosyl-l-methionine dehydratase AprD4 and its partner reductase AprD3 in the C3â€²-deoxygenation of aminoglycoside antibiotics. Journal of Antibiotics, 2017, 70, 423-428.	2.0	15
39	Genome mining of the sordarin biosynthetic gene cluster from Sordaria araneosa Cain ATCC 36386: characterization of cycloaraneosene synthase and GDP-6-deoxyaltrose transferase. Journal of Antibiotics, 2016, 69, 541-548.	2.0	46
40	Aminoglycoside Antibiotics: New Insights into the Biosynthetic Machinery of Old Drugs. Chemical Record, 2016, 16, 4-18.	5.8	45
41	Fiveâ€Membered Cyclitol Phosphate Formation by a myoâ€Inositol Phosphate Synthase Orthologue in the Biosynthesis of the Carbocyclic Nucleoside Antibiotic Aristeromycin. ChemBioChem, 2016, 17, 2143-2148.	2.6	13
42	Mechanisms of Î²-amino acid incorporation in polyketide macrolactam biosynthesis. Current Opinion in Chemical Biology, 2016, 35, 58-64.	6.1	33
43	Parallel Postâ€Polyketide Synthase Modification Mechanism Involved in FDâ€891 Biosynthesis in Streptomyces graminofaciens Aâ€8890. ChemBioChem, 2016, 17, 233-238.	2.6	7
44	Synthesis and structureâ€“activity relationship study of FD-891: importance of the side chain and C8â€“C9 epoxide for cytotoxic activity against cancer cells. Journal of Antibiotics, 2016, 69, 287-293.	2.0	9
45	Vicenistatin induces early endosome-derived vacuole formation in mammalian cells. Bioscience, Biotechnology and Biochemistry, 2016, 80, 902-910.	1.3	13
46	Structure-based analysis of the molecular interactions between acyltransferase and acyl carrier protein in vicenistatin biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1802-1807.	7.1	69
47	Identification of the Fluvirucin B2 (Sch 38518) Biosynthetic Gene Cluster from Actinomadura fulva subsp. indica ATCC 53714: substrate Specificity of the Î²-Amino Acid Selective Adenylating Enzyme FlvN. Bioscience, Biotechnology and Biochemistry, 2016, 80, 935-941.	1.3	20
48	Epimerization at Câ€²â€²â€² in Butirosin Biosynthesis by an NAD⁺â€Dependent Dehydrogenase BtrE and an NADPHâ€Dependent Reductase BtrF. ChemBioChem, 2015, 16, 487-495.	2.6	12
49	Genome Mining of the Hitachimycin Biosynthetic Gene Cluster: Involvement of a Phenylalanine-2,3-aminomutase in Biosynthesis. ChemBioChem, 2015, 16, 909-914.	2.6	36
50	Mechanismâ€Based Trapping of the Quinonoid Intermediate by Using the K276R Mutant of PLPâ€Dependent 3â€Aminobenzoate Synthase PctV in the Biosynthesis of Pactamycin. ChemBioChem, 2015, 16, 2484-2490.	2.6	12
51	The Crystal Structure of the Adenylation Enzyme VinN Reveals a Unique Î²-Amino Acid Recognition Mechanism. Journal of Biological Chemistry, 2014, 289, 31448-31457.	3.4	46
52	Characterization of a Radical S-Adenosyl-<scp>l</scp>-methionine Epimerase, NeoN, in the Last Step of Neomycin B Biosynthesis. Journal of the American Chemical Society, 2014, 136, 13909-13915.	13.7	57
53	Biosynthesis of natural products containing Î²-amino acids. Natural Product Reports, 2014, 31, 1056-1073.	10.3	188
54	The crystal structure of the amidohydrolase VinJ shows a unique hydrophobic tunnel for its interaction with polyketide substrates. FEBS Letters, 2014, 588, 995-1000.	2.8	10

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55	Identification of the incednine biosynthetic gene cluster: characterization of novel Î²-glutamate-Î²-decarboxylase IdnL3. Journal of Antibiotics, 2013, 66, 691-699.	2.0	38
56	A Single PLPâ€Dependent Enzyme PctV Catalyzes the Transformation of 3â€Dehydroshikimate into 3â€Aminobenzoate in the Biosynthesis of Pactamycin. ChemBioChem, 2013, 14, 1198-1203.	2.6	22
57	A Unique Amino Transfer Mechanism for Constructing the Î²â€Amino Fatty Acid Starter Unit in the Biosynthesis of the Macrolactam Antibiotic Cremimycin. ChemBioChem, 2013, 14, 1998-2006.	2.6	42
58	Characterization of Polyphosphate Glucokinase SCO5059 fromStreptomyces coelicolorA3(2). Bioscience, Biotechnology and Biochemistry, 2013, 77, 2322-2324.	1.3	11
59	Potent Oligomerization and Macrocyclization Activity of the Thioesterase Domain of Vicenistatin Polyketide Synthase. Synlett, 2012, 23, 1843-1846.	1.8	2
60	A Unique Pathway for the 3-Aminobutyrate Starter Unit from l-Glutamate through Î²-Glutamate during Biosynthesis of the 24-Membered Macrolactam Antibiotic, Incednine. Organic Letters, 2012, 14, 4591-4593.	4.6	24
61	Engineering the synthetic potential of Î²-lactam synthetase and the importance of catalytic loop dynamics. MedChemComm, 2012, 3, 960.	3.4	6
62	The Last Step of Kanamycin Biosynthesis: Unique Deamination Reaction Catalyzed by the Î±â€Ketoglutarateâ€Dependent Nonheme Iron Dioxygenase KanJ and the NADPHâ€Dependent Reductase KanK. Angewandte Chemie - International Edition, 2012, 51, 3428-3431.	13.8	27
63	A Natural Protecting Group Strategy To Carry an Amino Acid Starter Unit in the Biosynthesis of Macrolactam Polyketide Antibiotics. Journal of the American Chemical Society, 2011, 133, 18134-18137.	13.7	61
64	Cloning of the biosynthetic gene cluster for naphthoxanthene antibiotic FD-594 from Streptomyces sp. TA-0256. Journal of Antibiotics, 2011, 64, 123-132.	2.0	24
65	Biosynthetic pathway of macrolactam polyketide antibiotic cremimycin. Tetrahedron, 2011, 67, 8559-8563.	1.9	9
66	Genome Mining Reveals Two Novel Bacterial Sesquiterpene Cyclases: (â^')â€Germacradienâ€4â€ol and (â^')â€epiâ€Î±â€Bisabolol Synthases from Streptomyces citricolor. ChemBioChem, 2011, 12, 2271-2275.	2.6	51
67	Cloning and Characterization of the Biosynthetic Gene Cluster of 16â€Membered Macrolide Antibiotic FDâ€891: Involvement of a Dual Functional Cytochrome P450 Monooxygenase Catalyzing Epoxidation and Hydroxylation. ChemBioChem, 2010, 11, 1574-1582.	2.6	35
68	Enzymatic activity of a glycosyltransferase KanM2 encoded in the kanamycin biosynthetic gene cluster. Journal of Antibiotics, 2009, 62, 707-710.	2.0	14
69	Biosynthetic genes for aminoglycoside antibiotics. Journal of Antibiotics, 2009, 62, 471-481.	2.0	77
70	Enzymatic preparation of neomycin C from ribostamycin. Journal of Antibiotics, 2009, 62, 643-646.	2.0	9
71	Chapter 20 Biosynthetic Enzymes for the Aminoglycosides Butirosin and Neomycin. Methods in Enzymology, 2009, 459, 493-519.	1.0	37
72	New glycosylated derivatives of versipelostatin, the GRP78/Bip molecular chaperone down-regulator, from Streptomyces versipellis 4083-SVS6. Organic and Biomolecular Chemistry, 2009, 7, 1454.	2.8	21

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73	Involvement of Two Distinct Nâ€Acetylglucosaminyltransferases and a Dualâ€Function Deacetylase in Neomycin Biosynthesis. ChemBioChem, 2008, 9, 865-869.	2.6	26
74	Biosynthetic pathway of 24-membered macrolactam glycoside incednine. Tetrahedron, 2008, 64, 6651-6656.	1.9	13
75	Mechanistic Study on the Reaction of a Radical SAM Dehydrogenase BtrN by Electron Paramagnetic Resonance Spectroscopy. Biochemistry, 2008, 47, 8950-8960.	2.5	47
76	Characterization and Mechanistic Study of a Radical SAM Dehydrogenase in the Biosynthesis of Butirosin. Journal of the American Chemical Society, 2007, 129, 15147-15155.	13.7	81
77	Unique O-ribosylation in the biosynthesis of butirosin. Bioorganic and Medicinal Chemistry, 2007, 15, 4360-4368.	3.0	25
78	Role of glutamate 243 in the active site of 2-deoxy-scyllo-inosose synthase from Bacillus circulans. Bioorganic and Medicinal Chemistry, 2007, 15, 418-423.	3.0	13
79	Cloning of the Pactamycin Biosynthetic Gene Cluster and Characterization of a Crucial Glycosyltransferase Prior to a Unique Cyclopentane Ring Formation. Journal of Antibiotics, 2007, 60, 492-503.	2.0	51
80	Biosynthesis of 2-Deoxystreptamine-containing Antibiotics in Streptoalloteichus hindustanus JCM 3268: Characterization of 2-Deoxy-scyllo-inosose Synthase. Journal of Antibiotics, 2006, 59, 358-361.	2.0	13
81	Macrolactam formation catalyzed by the thioesterase domain of vicenistatin polyketide synthase. Tetrahedron Letters, 2006, 47, 1529-1532.	1.4	14
82	Biosynthesis of 2-Deoxystreptamine by Three Crucial Enzymes in Streptomyces fradiae NBRC 12773. Journal of Antibiotics, 2005, 58, 766-774.	2.0	43
83	Extended Sequence and Functional Analysis of the Butirosin Biosynthetic Gene Cluster in Bacillus circulans SANK 72073. Journal of Antibiotics, 2005, 58, 373-379.	2.0	29
84	Stereochemical Recognition of Doubly Functional Aminotransferase in 2-Deoxystreptamine Biosynthesis. Journal of the American Chemical Society, 2005, 127, 5869-5874.	13.7	33
85	A New Family of Glucose-1-phosphate/Glucosamine-1-phosphate Nucleotidylyltransferase in the Biosynthetic Pathways for Antibiotics. Journal of the American Chemical Society, 2005, 127, 1711-1718.	13.7	37
86	Reaction Stereochemistry of 2-Deoxy-scyllo-inosose Synthase, the Key Enzyme in the Biosynthesis of 2-Deoxystreptamine. Chemistry Letters, 2003, 32, 438-439.	1.3	13
87	Significance of the 20-kDa Subunit of Heterodimeric 2-Deoxy-scyllo-inosose Synthase for the Biosynthesis of Butirosin Antibiotics inBacillus circulans. Bioscience, Biotechnology and Biochemistry, 2002, 66, 1538-1545.	1.3	13
88	Precursor-Directed Biosynthesis. Chemistry and Biology, 2002, 9, 131-142.	6.0	53
89	Butirosin-biosynthetic Gene Cluster from Bacillus circulans.. Journal of Antibiotics, 2000, 53, 1158-1167.	2.0	81
90	An expeditious chemo-enzymatic route from glucose to catechol by the use of 2-deoxy-scyllo-inosose synthase. Tetrahedron Letters, 2000, 41, 1935-1938.	1.4	29

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91	Analysis of the Molecular Recognition Features of Individual Modules Derived from the Erythromycin Polyketide Synthase. Journal of the American Chemical Society, 2000, 122, 4847-4852.	13.7	71
92	Purification and Characterization of 2-Deoxy-scyllo-inosose Synthase Derived from Bacillus circulans. A Crucial Carbocyclization Enzyme in the Biosynthesis of 2-Deoxystreptamine-containing Aminoglycoside Antibiotics.. Journal of Antibiotics, 1999, 52, 81-88.	2.0	45
93	Molecular Cloning of the Gene for the Key Carbocycle-forming Enzyme in the Biosynthesis of 2-Deoxystreptamine-containing Aminocyclitol Antibiotics and Its Comparison with Dehydroquinate Synthase.. Journal of Antibiotics, 1999, 52, 559-571.	2.0	59
94	Substrate Specificity of 2-Deoxy-scyllo-inosose Synthase, the Starter Enzyme for 2-Deoxystreptamine Biosynthesis, toward Deoxyglucose-6-phosphates and Proposed Mechanism. Bioscience, Biotechnology and Biochemistry, 1998, 62, 2396-2407.	1.3	20
95	Biochemical Studies on 2-deoxy-scyllo-inosose, an early intermediate in biosynthesis of 2-dexystreptamin. Part VI. Kinetic Isotope Effect and Reaction Mechanism of 2-Deoxy-scyllo-inosose Synthase Derived from Butirosin-producing Bacillus circulans.. Journal of Antibiotics, 1997, 50, 424-428.	2.0	27