

Fumitaka Kudo

List of Publications by Year in descending order

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95
papers

2,574
citations

159585

30
h-index

233421

45
g-index

100
all docs

100
docs citations

100
times ranked

2118
citing authors

#	ARTICLE	IF	CITATIONS
1	Biosynthesis of natural products containing $\hat{1}^2$ -amino acids. <i>Natural Product Reports</i> , 2014, 31, 1056-1073.	10.3	188
2	Butirosin-biosynthetic Gene Cluster from <i>Bacillus circulans</i> .. <i>Journal of Antibiotics</i> , 2000, 53, 1158-1167.	2.0	81
3	Characterization and Mechanistic Study of a Radical SAM Dehydrogenase in the Biosynthesis of Butirosin. <i>Journal of the American Chemical Society</i> , 2007, 129, 15147-15155.	13.7	81
4	Biosynthetic genes for aminoglycoside antibiotics. <i>Journal of Antibiotics</i> , 2009, 62, 471-481.	2.0	77
5	Protein-protein interactions in polyketide synthase nonribosomal peptide synthetase hybrid assembly lines. <i>Natural Product Reports</i> , 2018, 35, 1185-1209.	10.3	73
6	Analysis of the Molecular Recognition Features of Individual Modules Derived from the Erythromycin Polyketide Synthase. <i>Journal of the American Chemical Society</i> , 2000, 122, 4847-4852.	13.7	71
7	Rapamycin directly activates lysosomal mucolipin TRP channels independent of mTOR. <i>PLoS Biology</i> , 2019, 17, e3000252.	5.6	70
8	Structure-based analysis of the molecular interactions between acyltransferase and acyl carrier protein in vicenistatin biosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 1802-1807.	7.1	69
9	A Natural Protecting Group Strategy To Carry an Amino Acid Starter Unit in the Biosynthesis of Macrolactam Polyketide Antibiotics. <i>Journal of the American Chemical Society</i> , 2011, 133, 18134-18137.	13.7	61
10	Molecular Cloning of the Gene for the Key Carbocycle-forming Enzyme in the Biosynthesis of 2-Deoxystreptamine-containing Aminocyclitol Antibiotics and Its Comparison with Dehydroquinase Synthase.. <i>Journal of Antibiotics</i> , 1999, 52, 559-571.	2.0	59
11	Characterization of a Radical S-Adenosyl-methionine Epimerase, NeoN, in the Last Step of Neomycin B Biosynthesis. <i>Journal of the American Chemical Society</i> , 2014, 136, 13909-13915.	13.7	57
12	Precursor-Directed Biosynthesis. <i>Chemistry and Biology</i> , 2002, 9, 131-142.	6.0	53
13	Cloning of the Pactamycin Biosynthetic Gene Cluster and Characterization of a Crucial Glycosyltransferase Prior to a Unique Cyclopentane Ring Formation. <i>Journal of Antibiotics</i> , 2007, 60, 492-503.	2.0	51
14	Genome Mining Reveals Two Novel Bacterial Sesquiterpene Cyclases: Germacradienol and Bisabolol Synthases from <i>Streptomyces citricolor</i> . <i>ChemBioChem</i> , 2011, 12, 2271-2275.	2.6	51
15	Mechanistic Study on the Reaction of a Radical SAM Dehydrogenase BtrN by Electron Paramagnetic Resonance Spectroscopy. <i>Biochemistry</i> , 2008, 47, 8950-8960.	2.5	47
16	The Crystal Structure of the Adenylation Enzyme VinN Reveals a Unique $\hat{1}^2$ -Amino Acid Recognition Mechanism. <i>Journal of Biological Chemistry</i> , 2014, 289, 31448-31457.	3.4	46
17	Genome mining of the sordarin biosynthetic gene cluster from <i>Sordaria araneosa</i> Cain ATCC 36386: characterization of cycloaraneosene synthase and GDP-6-deoxyaltrose transferase. <i>Journal of Antibiotics</i> , 2016, 69, 541-548.	2.0	46
18	Purification and Characterization of 2-Deoxy-scylo-inosose Synthase Derived from <i>Bacillus circulans</i> . A Crucial Carbocyclization Enzyme in the Biosynthesis of 2-Deoxystreptamine-containing Aminoglycoside Antibiotics.. <i>Journal of Antibiotics</i> , 1999, 52, 81-88.	2.0	45

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19	Aminoglycoside Antibiotics: New Insights into the Biosynthetic Machinery of Old Drugs. <i>Chemical Record</i> , 2016, 16, 4-18.	5.8	45
20	Structural basis of the nonribosomal codes for nonproteinogenic amino acid selective adenylation enzymes in the biosynthesis of natural products. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2019, 46, 515-536.	3.0	44
21	Biosynthesis of 2-Deoxystreptamine by Three Crucial Enzymes in <i>Streptomyces fradiae</i> NBRC 12773. <i>Journal of Antibiotics</i> , 2005, 58, 766-774.	2.0	43
22	A Unique Amino Transfer Mechanism for Constructing the β -Amino Fatty Acid Starter Unit in the Biosynthesis of the Macrolactam Antibiotic Cremimycin. <i>ChemBioChem</i> , 2013, 14, 1998-2006.	2.6	42
23	Methylcobalamin-Dependent Radical SAM C-Methyltransferase Fom3 Recognizes Cytidylyl-2-hydroxyethylphosphonate and Catalyzes the Nonstereoselective C-Methylation in Fosfomycin Biosynthesis. <i>Biochemistry</i> , 2017, 56, 3519-3522.	2.5	41
24	Structural Basis of Protein-Protein Interactions between a <i>trans</i> -Acting Acyltransferase and Acyl Carrier Protein in Polyketide Disorazole Biosynthesis. <i>Journal of the American Chemical Society</i> , 2018, 140, 7970-7978.	13.7	40
25	Identification of the incednine biosynthetic gene cluster: characterization of novel β -glutamate- β -decarboxylase IdnL3. <i>Journal of Antibiotics</i> , 2013, 66, 691-699.	2.0	38
26	A New Family of Glucose-1-phosphate/Glucosamine-1-phosphate Nucleotidyltransferase in the Biosynthetic Pathways for Antibiotics. <i>Journal of the American Chemical Society</i> , 2005, 127, 1711-1718.	13.7	37
27	Chapter 20 Biosynthetic Enzymes for the Aminoglycosides Butirosin and Neomycin. <i>Methods in Enzymology</i> , 2009, 459, 493-519.	1.0	37
28	Genome Mining of the Hitachimycin Biosynthetic Gene Cluster: Involvement of a Phenylalanine-2,3-aminomutase in Biosynthesis. <i>ChemBioChem</i> , 2015, 16, 909-914.	2.6	36
29	Cloning and Characterization of the Biosynthetic Gene Cluster of 16-Membered Macrolide Antibiotic FD-891: Involvement of a Dual Functional Cytochrome P450 Monooxygenase Catalyzing Epoxidation and Hydroxylation. <i>ChemBioChem</i> , 2010, 11, 1574-1582.	2.6	35
30	Stereochemical Recognition of Doubly Functional Aminotransferase in 2-Deoxystreptamine Biosynthesis. <i>Journal of the American Chemical Society</i> , 2005, 127, 5869-5874.	13.7	33
31	Mechanisms of β -amino acid incorporation in polyketide macrolactam biosynthesis. <i>Current Opinion in Chemical Biology</i> , 2016, 35, 58-64.	6.1	33
32	An expeditious chemo-enzymatic route from glucose to catechol by the use of 2-deoxy-scylo-inosose synthase. <i>Tetrahedron Letters</i> , 2000, 41, 1935-1938.	1.4	29
33	Extended Sequence and Functional Analysis of the Butirosin Biosynthetic Gene Cluster in <i>Bacillus circulans</i> SANK 72073. <i>Journal of Antibiotics</i> , 2005, 58, 373-379.	2.0	29
34	Total Synthesis of Actinorhodin. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 4264-4270.	13.8	29
35	Biochemical Studies on 2-deoxy-scylo-inosose, an early intermediate in biosynthesis of 2-deoxystreptamin. Part VI. Kinetic Isotope Effect and Reaction Mechanism of 2-Deoxy-scylo-inosose Synthase Derived from Butirosin-producing <i>Bacillus circulans</i> . <i>Journal of Antibiotics</i> , 1997, 50, 424-428.	2.0	27
36	The Last Step of Kanamycin Biosynthesis: Unique Deamination Reaction Catalyzed by the β -Ketoglutarate-Dependent Nonheme Iron Dioxygenase KanJ and the NADPH-Dependent Reductase KanK. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 3428-3431.	13.8	27

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37	Involvement of Two Distinct <i>N</i> -Acetylglucosaminyltransferases and a Dual-Function Deacetylase in Neomycin Biosynthesis. <i>ChemBioChem</i> , 2008, 9, 865-869.	2.6	26
38	Unique O-ribosylation in the biosynthesis of butirosin. <i>Bioorganic and Medicinal Chemistry</i> , 2007, 15, 4360-4368.	3.0	25
39	Cloning of the biosynthetic gene cluster for naphthoxanthene antibiotic FD-594 from <i>Streptomyces</i> sp. TA-0256. <i>Journal of Antibiotics</i> , 2011, 64, 123-132.	2.0	24
40	A Unique Pathway for the 3-Aminobutyrate Starter Unit from L-Glutamate through β^2 -Glutamate during Biosynthesis of the 24-Membered Macrolactam Antibiotic, Incednine. <i>Organic Letters</i> , 2012, 14, 4591-4593.	4.6	24
41	<i>C</i> -Methylation Catalyzed by Fom3, a Cobalamin-Dependent Radical <i>S</i> -adenosyl-methionine Enzyme in Fosfomycin Biosynthesis, Proceeds with Inversion of Configuration. <i>Biochemistry</i> , 2018, 57, 4963-4966.	2.5	24
42	Identification of a gene cluster for telomestatin biosynthesis and heterologous expression using a specific promoter in a clean host. <i>Scientific Reports</i> , 2017, 7, 3382.	3.3	23
43	Characterization of Radical SAM Adenosylhopane Synthase, HpnH, which Catalyzes the 5 β^2 -Deoxyadenosyl Radical Addition to Diploptene in the Biosynthesis of C 35 Bacteriohopanepolyols. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 237-241.	13.8	23
44	A Single PLP-Dependent Enzyme PctV Catalyzes the Transformation of 3-Dehydroshikimate into 3-Aminobenzoate in the Biosynthesis of Pactamycin. <i>ChemBioChem</i> , 2013, 14, 1198-1203.	2.6	22
45	New glycosylated derivatives of versipelostatin, the GRP78/Bip molecular chaperone down-regulator, from <i>Streptomyces versipellis</i> 4083-SVS6. <i>Organic and Biomolecular Chemistry</i> , 2009, 7, 1454.	2.8	21
46	Biochemical characterization and structural insight into aliphatic β^2 -amino acid adenylation enzymes IdnL1 and CmiS6. <i>Proteins: Structure, Function and Bioinformatics</i> , 2017, 85, 1238-1247.	2.6	21
47	Substrate Specificity of 2-Deoxy-scyllo-inosose Synthase, the Starter Enzyme for 2-Deoxystreptamine Biosynthesis, toward Deoxyglucose-6-phosphates and Proposed Mechanism. <i>Bioscience, Biotechnology and Biochemistry</i> , 1998, 62, 2396-2407.	1.3	20
48	Identification of the Fluvirucin B2 (Sch 38518) Biosynthetic Gene Cluster from <i>Actinomadura fulva</i> subsp. <i>indica</i> ATCC 53714: substrate Specificity of the β^2 -Amino Acid Selective Adenylation Enzyme FlvN. <i>Bioscience, Biotechnology and Biochemistry</i> , 2016, 80, 935-941.	1.3	20
49	Structural analysis of the dual-function thioesterase SAV606 unravels the mechanism of Michael addition of glycine to an α,β^2 -unsaturated thioester. <i>Journal of Biological Chemistry</i> , 2017, 292, 10926-10937.	3.4	20
50	Structural Characterization of Complex of Adenylation Domain and Carrier Protein by Using Pantetheine Cross-Linking Probe. <i>ACS Chemical Biology</i> , 2020, 15, 1808-1812.	3.4	17
51	Fosfomycin Biosynthesis <i>via</i> Transient Cytidylylation of 2-Hydroxyethylphosphonate by the Bifunctional Fom1 Enzyme. <i>ACS Chemical Biology</i> , 2017, 12, 2209-2215.	3.4	16
52	Substrate specificity of radical S-adenosyl-L-methionine dehydratase AprD4 and its partner reductase AprD3 in the C3-deoxygenation of aminoglycoside antibiotics. <i>Journal of Antibiotics</i> , 2017, 70, 423-428.	2.0	15
53	An Engineered Aryl Acid Adenylation Domain with an Enlarged Substrate Binding Pocket. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 6906-6910.	13.8	15
54	Macrolactam formation catalyzed by the thioesterase domain of vicenistatin polyketide synthase. <i>Tetrahedron Letters</i> , 2006, 47, 1529-1532.	1.4	14

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55	Enzymatic activity of a glycosyltransferase KanM2 encoded in the kanamycin biosynthetic gene cluster. <i>Journal of Antibiotics</i> , 2009, 62, 707-710.	2.0	14
56	Substrate Recognition by a Dual-Function P450 Monooxygenase GfsF Involved in FD-891 Biosynthesis. <i>ChemBioChem</i> , 2017, 18, 2179-2187.	2.6	14
57	Significance of the 20-kDa Subunit of Heterodimeric 2-Deoxy-scyllo-inosose Synthase for the Biosynthesis of Butirosin Antibiotics in <i>Bacillus circulans</i> . <i>Bioscience, Biotechnology and Biochemistry</i> , 2002, 66, 1538-1545.	1.3	13
58	Reaction Stereochemistry of 2-Deoxy-scyllo-inosose Synthase, the Key Enzyme in the Biosynthesis of 2-Deoxystreptamine. <i>Chemistry Letters</i> , 2003, 32, 438-439.	1.3	13
59	Biosynthesis of 2-Deoxystreptamine-containing Antibiotics in <i>Streptoalloteichus hindustanus</i> JCM 3268: Characterization of 2-Deoxy-scyllo-inosose Synthase. <i>Journal of Antibiotics</i> , 2006, 59, 358-361.	2.0	13
60	Role of glutamate 243 in the active site of 2-deoxy-scyllo-inosose synthase from <i>Bacillus circulans</i> . <i>Bioorganic and Medicinal Chemistry</i> , 2007, 15, 418-423.	3.0	13
61	Biosynthetic pathway of 24-membered macrolactam glycoside incednine. <i>Tetrahedron</i> , 2008, 64, 6651-6656.	1.9	13
62	Five-Membered Cyclitol Phosphate Formation by a myo-Inositol Phosphate Synthase Orthologue in the Biosynthesis of the Carbocyclic Nucleoside Antibiotic Aristeromycin. <i>ChemBioChem</i> , 2016, 17, 2143-2148.	2.6	13
63	Vicenistatin induces early endosome-derived vacuole formation in mammalian cells. <i>Bioscience, Biotechnology and Biochemistry</i> , 2016, 80, 902-910.	1.3	13
64	Epimerization at C-2 in Butirosin Biosynthesis by an NAD ⁺ -Dependent Dehydrogenase BtrE ₂ and an NADPH-Dependent Reductase BtrF. <i>ChemBioChem</i> , 2015, 16, 487-495.	2.6	12
65	Mechanism-Based Trapping of the Quinonoid Intermediate by Using the K276R Mutant of PLP-Dependent 3-Aminobenzoate Synthase PctV in the Biosynthesis of Pactamycin. <i>ChemBioChem</i> , 2015, 16, 2484-2490.	2.6	12
66	Characterization of Polyphosphate Glucokinase SCO5059 from <i>Streptomyces coelicolor</i> A3(2). <i>Bioscience, Biotechnology and Biochemistry</i> , 2013, 77, 2322-2324.	1.3	11
67	Biochemical and Structural Analysis of FomD That Catalyzes the Hydrolysis of Cytidyl (S)-2-Hydroxypropylphosphonate in Fosfomycin Biosynthesis. <i>Biochemistry</i> , 2018, 57, 4858-4866.	2.5	11
68	Functional Characterization of 3-Aminobenzoic Acid Adenylation Enzyme PctU and UDP-N-Acetylglucosamine: 3-Aminobenzoyl-ACP Glycosyltransferase PctL in Pactamycin Biosynthesis. <i>ChemBioChem</i> , 2019, 20, 2458-2462.	2.6	11
69	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. <i>Biomolecules</i> , 2020, 10, 775.	4.0	11
70	The crystal structure of the amidohydrolase VinJ shows a unique hydrophobic tunnel for its interaction with polyketide substrates. <i>FEBS Letters</i> , 2014, 588, 995-1000.	2.8	10
71	Structural Insight into the Reaction Mechanism of Ketosynthase-Like Decarboxylase in a Loading Module of Modular Polyketide Synthases. <i>ACS Chemical Biology</i> , 2022, 17, 198-206.	3.4	10
72	Enzymatic preparation of neomycin C from ribostamycin. <i>Journal of Antibiotics</i> , 2009, 62, 643-646.	2.0	9

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73	Biosynthetic pathway of macrolactam polyketide antibiotic cremimycin. <i>Tetrahedron</i> , 2011, 67, 8559-8563.	1.9	9
74	Synthesis and structure-activity relationship study of FD-891: importance of the side chain and C8-C9 epoxide for cytotoxic activity against cancer cells. <i>Journal of Antibiotics</i> , 2016, 69, 287-293.	2.0	9
75	NAD ⁺ -Dependent Dehydrogenase PctP and Pyridoxal 5-Phosphate Dependent Aminotransferase PctC Catalyze the First Postglycosylation Modification of the Sugar Intermediate in Pactamycin Biosynthesis. <i>ChemBioChem</i> , 2018, 19, 126-130.	2.6	8
76	Functional and structural characterization of IdnL7, an adenylation enzyme involved in incednine biosynthesis. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2019, 75, 299-306.	0.8	8
77	Parallel Post-Polyketide Synthase Modification Mechanism Involved in FD-891 Biosynthesis in <i>Streptomyces graminofaciens</i> . <i>ChemBioChem</i> , 2016, 17, 233-238.	2.6	7
78	Mutational Biosynthesis of Hitachimycin Analogs Controlled by the β -Amino Acid-Selective Adenylation Enzyme HitB. <i>ACS Chemical Biology</i> , 2021, 16, 539-547.	3.4	7
79	Engineering the synthetic potential of β -lactam synthetase and the importance of catalytic loop dynamics. <i>MedChemComm</i> , 2012, 3, 960.	3.4	6
80	Carbon-free production of 2-deoxy-scyllo-inosose (DOI) in cyanobacterium <i>Synechococcus elongatus</i> PCC 7942. <i>Bioscience, Biotechnology and Biochemistry</i> , 2018, 82, 161-165.	1.3	6
81	Structural Analysis of the Glycine Oxidase Homologue CmiS2 Reveals a Unique Substrate Recognition Mechanism for Formation of a β -Amino Acid Starter Unit in Cremimycin Biosynthesis. <i>Biochemistry</i> , 2019, 58, 2706-2709.	2.5	6
82	Complex structure of the acyltransferase VinK and the carrier protein VinL with a pantetheine cross-linking probe. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2021, 77, 294-302.	0.8	6
83	Functional and Structural Analyses of the Split-Dehydratase Domain in the Biosynthesis of Macrolactam Polyketide Cremimycin. <i>Biochemistry</i> , 2019, 58, 4799-4803.	2.5	5
84	Stereochemistry in the Reaction of the <i>myo</i> -Inositol Phosphate Synthase Ortholog Ari2 during Aristeromycin Biosynthesis. <i>Biochemistry</i> , 2019, 58, 5112-5116.	2.5	5
85	Biosynthesis of Aminoglycoside Antibiotics. , 2020, , 588-612.		5
86	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. <i>Biochemistry</i> , 2020, 59, 1470-1473.	2.5	5
87	Stepwise Post-glycosylation Modification of Sugar Moieties in Kanamycin Biosynthesis. <i>ChemBioChem</i> , 2021, 22, 1668-1675.	2.6	3
88	Biochemical and Mutational Analysis of Radical <i>S</i> -Adenosyl-L-Methionine Adenosylhopane Synthase HpnH from <i>Zymomonas mobilis</i> Reveals that the Conserved Residue Cysteine-106 Reduces a Radical Intermediate and Determines the Stereochemistry. <i>Biochemistry</i> , 2021, 60, 2865-2874.	2.5	3
89	Biosynthesis of cyclitols. <i>Natural Product Reports</i> , 2022, 39, 1622-1642.	10.3	3
90	Potent Oligomerization and Macrocyclization Activity of the Thioesterase Domain of Vicenistatin Polyketide Synthase. <i>Synlett</i> , 2012, 23, 1843-1846.	1.8	2

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91	Characterization of Radical SAM Adenosylhopane Synthase, HpnH, which Catalyzes the 5'-Deoxyadenosyl Radical Addition to Diploptene in the Biosynthesis of C ₃₅ Bacteriohopanepolyols. <i>Angewandte Chemie</i> , 2020, 132, 243-247.	2.0	2
92	Generation of incednine derivatives by mutasynthesis. <i>Journal of Antibiotics</i> , 2020, 73, 794-797.	2.0	2
93	One-pot enzymatic synthesis of 2-deoxy-scyllo-inosose from d-glucose and polyphosphate. <i>Bioscience, Biotechnology and Biochemistry</i> , 2021, 85, 108-114.	1.3	2
94	An Engineered Aryl Acid Adenylation Domain with an Enlarged Substrate Binding Pocket. <i>Angewandte Chemie</i> , 2019, 131, 6980-6984.	2.0	0
95	Characterization of the cobalamin-dependent radical S-adenosyl-L-methionine enzyme C-methyltransferase Fom3 in fosfomycin biosynthesis. <i>Methods in Enzymology</i> , 2022, , 45-70.	1.0	0