# Chaitan Khosla

List of Publications by Year
in descending order



| 353 | 26,964 | 4955 84 | 9854 141 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 369 | 369 | 369 | 14818 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Structural Basis for Gluten Intolerance in Celiac Sprue. Science, 2002, 297, 2275-2279. | 6.0 | 1,383 |
| 2 | A new enzyme superfamily â€" the phosphopantetheinyl transferases. Chemistry and Biology, 1996, 3, 923-936. | 6.2 | 746 |
| 3 | Biosynthesis of Complex Polyketides in a Metabolically Engineered Strain of E. coli. Science, 2001, 291, 1790-1792. | 6.0 | 687 |
| 4 | Harnessing the Biosynthetic Code: Combinations, Permutations, and Mutations. , 1998, 282, 63-68. | | 539 |
| 5 | Cloning and Heterologous Expression of the Epothilone Gene Cluster. Science, 2000, 287, 640-642. | 6.0 | 429 |
| 6 | Structural basis for HLA-DQ2-mediated presentation of gluten epitopes in celiac disease. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4175-4179. | 3.3 | 386 |
| 7 | Transglutaminase 2 Undergoes a Large Conformational Change upon Activation. PLoS Biology, 2007, 5, e327. | 2.6 | 369 |
| 8 | Reovirus infection triggers inflammatory responses to dietary antigens and development of celiac disease. Science, 2017, 356, 44-50. | 6.0 | 367 |
| 9 | Tolerance and Specificity of Polyketide Synthases. Annual Review of Biochemistry, 1999, 68, 219-253. | 5.0 | 348 |
| 10 | Overproduction of free fatty acids in E. coli: Implications for biodiesel production. Metabolic Engineering, 2008, 10, 333-339. | 3.6 | 341 |
| 11 | Dissecting and Exploiting Intermodular Communication in Polyketide Synthases. Science, 1999, 284, 482-485. | 6.0 | 330 |
| 12 | Nonproteinogenic Amino Acid Building Blocks for Nonribosomal Peptide and Hybrid Polyketide Scaffolds. Angewandte Chemie - International Edition, 2013, 52, 7098-7124. | 7.2 | 314 |
| 13 | Intestinal digestive resistance of immunodominant gliadin peptides. American Journal of Physiology - Renal Physiology, 2002, 283, G996-G1003. | 1.6 | 296 |
| 14 | Rational design of aromatic polyketide natural products by recombinant assembly of enzymatic subunits. Nature, 1995, 375, 549-554. | 13.7 | 286 |
| 15 | Structure and Mechanism of the 6-Deoxyerythronolide B Synthase. Annual Review of Biochemistry, 2007, 76, 195-221. | 5.0 | 282 |
| 16 | Precursor-Directed Biosynthesis of Erythromycin Analogs by an Engineered Polyketide Synthase. Science, 1997, 277, 367-369. | 6.0 | 271 |
| 17 | The 2.7-A crystal structure of a 194-kDa homodimeric fragment of the 6-deoxyerythronolide B synthase. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 11124-11129. | 3.3 | 259 |
| 18 | Identification and Analysis of Multivalent Proteolytically Resistant Peptides from Gluten:Â Implications for Celiac Sprue. Journal of Proteome Research, 2005, 4, 1732-1741. | 1.8 | 239 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Heterologous expression of a bacterial haemoglobin improves the growth properties of recombinant Escherichia coli. Nature, 1988, 331, 633-635. | 13.7 | 233 |
| 20 | Biosynthesis of Polyketides in Heterologous Hosts. Microbiology and Molecular Biology Reviews, 2001, 65, 106-118. | 2.9 | 225 |
| 21 | Combination Enzyme Therapy for Gastric Digestion of Dietary Gluten in Patients With Celiac Sprue. Gastroenterology, 2007, 133, 472-480. | 0.6 | 205 |
| 22 | Comparative biochemical analysis of three bacterial prolyl endopeptidases: implications for coeliac sprue. Biochemical Journal, 2004, 383, 311-318. | 1.7 | 204 |
| 23 | Harnessing the Biosynthetic Potential of Modular Polyketide Synthases. Chemical Reviews, 1997, 97, 2577-2590. | 23.0 | 202 |
| 24 | Quantitative analysis and engineering of fatty acid biosynthesis in E. coli. Metabolic Engineering, 2010, 12, 378-386. | 3.6 | 198 |
| 25 | Metabolic engineering for drug discovery and development. Nature Reviews Drug Discovery, 2003, 2, 1019-1025. | 21.5 | 187 |
| 26 | Role of linkers in communication between protein modules. Current Opinion in Chemical Biology, 2000, 4, 22-27. | 2.8 | 179 |
| 27 | Dietary gluten triggers concomitant activation of CD4 <sup>+</sup> and CD8 <sup>+</sup> Î±Î² T cells and Î³Î´ T cells in celiac disease. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13073-13078. | 3.3 | 178 |
| 28 | Evolution and Diversity of Assembly-Line Polyketide Synthases. Chemical Reviews, 2019, 119, 12524-12547. | 23.0 | 178 |
| 29 | Extracellular Transglutaminase 2 Is Catalytically Inactive, but Is Transiently Activated upon Tissue Injury. PLoS ONE, 2008, 3, e1861. | 1.1 | 174 |
| 30 | Isolation and characterization of the epothilone biosynthetic gene cluster from Sorangium cellulosum. Gene, 2000, 249, 153-160. | 1.0 | 172 |
| 31 | Transglutaminase 2 inhibitors and their therapeutic role in disease states. , 2007, 115, 232-245. | | 170 |
| 32 | Biosynthesis of Aromatic Polyketides in Bacteria. Accounts of Chemical Research, 2009, 42, 631-639. | 7.6 | 170 |
| 33 | HEx: A heterologous expression platform for the discovery of fungal natural products. Science Advances, 2018, 4, eaar5459. | 4.7 | 167 |
| 34 | Expanding the Fluorine Chemistry of Living Systems Using Engineered Polyketide Synthase Pathways. Science, 2013, 341, 1089-1094. | 6.0 | 166 |
| 35 | Evolution of polyketide synthases in bacteria. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 4595-4600. | 3.3 | 163 |
| 36 | An antibiotic factory caught in action. Nature Structural and Molecular Biology, 2004, 11, 888-893. | 3.6 | 162 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Parallel shRNA and CRISPR-Cas9 screens enable antiviral drug target identification. Nature Chemical Biology, 2016, 12, 361-366. | 3.9 | 157 |
| 38 | Transglutaminase 2 inhibitor, KCC009, disrupts fibronectin assembly in the extracellular matrix and sensitizes orthotopic glioblastomas to chemotherapy. Oncogene, 2007, 26, 2563-2573. | 2.6 | 156 |
| 39 | Redox Regulation of Transglutaminase 2 Activity. Journal of Biological Chemistry, 2010, 285, 25402-25409. | 1.6 | 155 |
| 40 | Chemistry and Biology of Dihydroisoxazole Derivatives: Selective Inhibitors of Human Transglutaminase 2. Chemistry and Biology, 2005, 12, 469-475. | 6.2 | 154 |
| 41 | In vitro reconstitution and steady-state analysis of the fatty acid synthase from Escherichia coli. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18643-18648. | 3.3 | 152 |
| 42 | Structural and Mechanistic Analysis of Protein Interactions in Module 3 of the 6-Deoxyerythronolide B Synthase. Chemistry and Biology, 2007, 14, 931-943. | 6.2 | 151 |
| 43 | Toward the Assessment of Food Toxicity for Celiac Patients: Characterization of Monoclonal Antibodies to a Main Immunogenic Gluten Peptide. PLoS ONE, 2008, 3, e2294. | 1.1 | 141 |
| 44 | Mechanism and specificity of the terminal thioesterase domain from the erythromycin polyketide synthase. Chemistry and Biology, 1999, 6, 117-125. | 6.2 | 140 |
| 45 | Antigen Presentation to Celiac Lesion-Derived T Cells of a 33-Mer Gliadin Peptide Naturally Formed by Gastrointestinal Digestion. Journal of Immunology, 2004, 173, 1757-1762. | 0.4 | 140 |
| 46 | Apoptolidin, a selective cytotoxic agent, is an inhibitor of F0F1-ATPase. Chemistry and Biology, 2001, 8, 71-80. | 6.2 | 138 |
| 47 | Modular enzymes. Nature, 2001, 409, 247-252. | 13.7 | 137 |
| 48 | Future therapeutic options for celiac disease. Nature Reviews Gastroenterology & Hepatology, 2005, 2, 140-147. | 1.7 | 137 |
| 49 | Structural and mechanistic analysis of two prolyl endopeptidases: Role of interdomain dynamics in catalysis and specificity. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3599-3604. | 3.3 | 133 |
| 50 | Combinatorial biosynthesis of polyketidesâ€”a perspective. Current Opinion in Chemical Biology, 2012, 16, 117-123. | 2.8 | 126 |
| 51 | Engineered Biosynthesis of Novel Polyketides: Dissection of the Catalytic Specificity of the act Ketoreductase. Journal of the American Chemical Society, 1994, 116, 4166-4170. | 6.6 | 125 |
| 52 | High Selectivity of Human Tissue Transglutaminase for Immunoactive Gliadin Peptides:Â Implications for Celiac Sprueâ€. Biochemistry, 2002, 41, 386-393. | 1.2 | 125 |
| 53 | Catalysis, Specificity, and ACP Docking Site of Streptomyces coelicolor Malonyl-CoA:ACP Transacylase. Structure, 2003, 11, 147-154. | 1.6 | 125 |
| 54 | Assessing the Balance between Proteinâˆ’Protein Interactions and Enzymeâˆ’Substrate Interactions in the Channeling of Intermediates between Polyketide Synthase Modules. Journal of the American Chemical Society, 2001, 123, 6465-6474. | 6.6 | 124 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Prolyl Endopeptidase-Mediated Destruction of T Cell Epitopes in Whole Gluten: Chemical and Immunological Characterization. Journal of Pharmacology and Experimental Therapeutics, 2005, 312, 19-26. | 1.3 | 123 |
| 56 | Selective Proteinâ^'Protein Interactions Direct Channeling of Intermediates between Polyketide Synthase Modules. Biochemistry, 2001, 40, 2326-2331. | 1.2 | 122 |
| 57 | IL-15, gluten and HLA-DQ8 drive tissue destruction in coeliac disease. Nature, 2020, 578, 600-604. | 13.7 | 122 |
| 58 | Prolyl endopeptidases. Cellular and Molecular Life Sciences, 2007, 64, 345-355. | 2.4 | 121 |
| 59 | Quantitative Analysis of the Relative Contributions of Donor Acyl Carrier Proteins, Acceptor Ketosynthases, and Linker Regions to Intermodular Transfer of Intermediates in Hybrid Polyketide Synthases. Biochemistry, 2002, 41, 5056-5066. | 1.2 | 120 |
| 60 | The Vitreoscilla hemoglobin gene: Molecular cloning, nucleotide sequence and genetic expression in Escherichia coli. Molecular Genetics and Genomics, 1988, 214, 158-161. | 2.4 | 119 |
| 61 | Genetic Engineering of Escherichia coli for Biofuel Production. Annual Review of Genetics, 2010, 44, 53-69. | 3.2 | 119 |
| 62 | Rational Design of Combination Enzyme Therapy for Celiac Sprue. Chemistry and Biology, 2006, 13, 649-658. | 6.2 | 117 |
| 63 | Assembly Line Polyketide Synthases: Mechanistic Insights and Unsolved Problems. Biochemistry, 2014, 53, 2875-2883. | 1.2 | 114 |
| 64 | Insights into Channel Architecture and Substrate Specificity from Crystal Structures of Two Macrocycle-Forming Thioesterases of Modular Polyketide Synthasesâ€,â€¡. Biochemistry, 2002, 41, 12598-12606. | 1.2 | 113 |
| 65 | KIR <sup>+</sup> CD8 <sup>+</sup> T cells suppress pathogenic T cells and are active in autoimmune diseases and COVID-19. Science, 2022, 376, eabi9591. | 6.0 | 113 |
| 66 | Biosynthesis of Yersiniabactin, a Complex Polyketide-Nonribosomal Peptide, Using Escherichia coli as a Heterologous Host. Applied and Environmental Microbiology, 2003, 69, 6698-6702. | 1.4 | 111 |
| 67 | Generation of polyketide libraries via combinatorial biosynthesis. Trends in Biotechnology, 1996, 14, 335-341. | 4.9 | 110 |
| 68 | Solution structure and proposed domainâ€“domain recognition interface of an acyl carrier protein domain from a modular polyketide synthase. Protein Science, 2007, 16, 2093-2107. | 3.1 | 107 |
| 69 | Peginterferon Lambda-1a for treatment of outpatients with uncomplicated COVID-19: a randomized placebo-controlled trial. Nature Communications, 2021, 12, 1967. | 5.8 | 107 |
| 70 | Heterologous Expression, Purification, Refolding, and Structural-Functional Characterization of EP-B2, a Self-Activating Barley Cysteine Endoprotease. Chemistry and Biology, 2006, 13, 637-647. | 6.2 | 104 |
| 71 | Structure and mechanism of assembly line polyketide synthases. Current Opinion in Structural Biology, 2016, 41, 10-18. | 2.6 | 104 |
| 72 | Polyketide Chain Length Control by Chain Length Factor. Journal of the American Chemical Society, 2003, 125, 12708-12709. | 6.6 | 102 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Effect of Prolyl Endopeptidase on Digestive-Resistant Gliadin Peptides in Vivo. Journal of Pharmacology and Experimental Therapeutics, 2004, 311, 213-219. | 1.3 | 101 |
| 74 | Novel therapies for coeliac disease. Journal of Internal Medicine, 2011, 269, 604-613. | 2.7 | 101 |
| 75 | Genetic Mapping and Biochemical Basis of Yellow Feather Pigmentation in Budgerigars. Cell, 2017, 171, 427-439.e21. | 13.5 | 101 |
| 76 | Evidence for Two Catalytically Independent Clusters of Active Sites in a Functional Modular Polyketide Synthaseâ€. Biochemistry, 1996, 35, 12363-12368. | 1.2 | 100 |
| 77 | Engineering the acyltransferase substrate specificity of assembly line polyketide synthases. Journal of the Royal Society Interface, 2013, 10, 20130297. | 1.5 | 99 |
| 78 | Reprogramming a module of the 6-deoxyerythronolide B synthase for iterative chain elongation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4110-4115. | 3.3 | 97 |
| 79 | Engineered biosynthesis of a triketide lactone from an incomplete modular polyketide synthase. Journal of the American Chemical Society, 1994, 116, 11612-11613. | 6.6 | 96 |
| 80 | Engineered biosynthesis of novel polyketides: manipulation and analysis of an aromatic polyketide synthase with unproven catalytic specificities. Journal of the American Chemical Society, 1993, 115, 11671-11675. | 6.6 | 95 |
| 81 | Engineered Biosynthesis of Novel Polyketides: actVII and actIV Genes Encode Aromatase and Cyclase Enzymes, Respectively. Journal of the American Chemical Society, 1994, 116, 10855-10859. | 6.6 | 95 |
| 82 | Activation of Extracellular Transglutaminase 2 by Thioredoxin. Journal of Biological Chemistry, 2011, 286, 37866-37873. | 1.6 | 95 |
| 83 | Extender Unit and Acyl Carrier Protein Specificity of Ketosynthase Domains of the 6-Deoxyerythronolide B Synthase. Journal of the American Chemical Society, 2006, 128, 3067-3074. | 6.6 | 94 |
| 84 | Solution Structure and Backbone Dynamics of the Holo Form of the Frenolicin Acyl Carrier Proteinâ€,â—Š. Biochemistry, 2003, 42, 4648-4657. | 1.2 | 93 |
| 85 | Effect of Pretreatment of Food Gluten With Prolyl Endopeptidase on Gluten-Induced Malabsorption in Celiac Sprue. Clinical Gastroenterology and Hepatology, 2005, 3, 687-694. | 2.4 | 93 |
| 86 | Engineered Biosynthesis of Novel Polyketides fromStreptomycesSpore Pigment Polyketide Synthases. Journal of the American Chemical Society, 1998, 120, 7749-7759. | 6.6 | 92 |
| 87 | Novel aspects of quantitation of immunogenic wheat gluten peptides by liquid chromatographyâ€“mass spectrometry/mass spectrometry. Journal of Chromatography A, 2010, 1217, 4167-4183. | 1.8 | 91 |
| 88 | Structures and Mechanisms of Polyketide Synthases. Journal of Organic Chemistry, 2009, 74, 6416-6420. | 1.7 | 88 |
| 89 | Combinatorial biosynthesis of â€˜unnaturalâ€™ natural products: the polyketide example. Chemistry and Biology, 1995, 2, 355-362. | 6.2 | 87 |
| 90 | Process and Metabolic Strategies for Improved Production of Escherichia coli -Derived 6-Deoxyerythronolide B. Applied and Environmental Microbiology, 2002, 68, 3287-3292. | 1.4 | 87 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Engineered Biosynthesis of Structurally Diverse Tetraketides by a Trimodular Polyketide Synthase. Journal of the American Chemical Society, 1996, 118, 9184-9185. | 6.6 | 86 |
| 92 | Purification and in Vitro Reconstitution of the Essential Protein Components of an Aromatic Polyketide Synthaseâ€. Biochemistry, 1998, 37, 2084-2088. | 1.2 | 86 |
| 93 | Cloning, Nucleotide Sequence, and Heterologous Expression of the Biosynthetic Gene Cluster for R1128, a Non-steroidal Estrogen Receptor Antagonist. Journal of Biological Chemistry, 2000, 275, 33443-33448. | 1.6 | 86 |
| 94 | Cyclic and dimeric gluten peptide analogues inhibiting DQ2-mediated antigen presentation in celiac disease. Bioorganic and Medicinal Chemistry, 2007, 15, 6565-6573. | 1.4 | 85 |
| 95 | A Food-Grade Enzyme Preparation with Modest Gluten Detoxification Properties. PLoS ONE, 2009, 4, e6313. | 1.1 | 84 |
| 96 | Engineered biosynthesis of an ansamycin polyketide precursor in Escherichia coli. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 9774-9778. | 3.3 | 83 |
| 97 | Revisiting the modularity of modular polyketide synthases. Current Opinion in Chemical Biology, 2009, 13, 135-143. | 2.8 | 83 |
| 98 | Expression of Intracellular Hemoglobin Improves Protein Synthesis in Oxygen-Limited Escherichia coli. Nature Biotechnology, 1990, 8, 849-853. | 9.4 | 82 |
| 99 | Metabolic Engineering of a Methylmalonyl-CoA Mutaseâ^'Epimerase Pathway for Complex Polyketide Biosynthesis inEscherichia coliâ€,â€¡. Biochemistry, 2002, 41, 5193-5201. | 1.2 | 82 |
| 100 | Tissue transglutaminase 2 inhibition promotes cell death and chemosensitivity in glioblastomas. Molecular Cancer Therapeutics, 2005, 4, 1293-1302. | 1.9 | 82 |
| 101 | Alcohol Stereochemistry in Polyketide Backbones Is Controlled by the Î²-Ketoreductase Domains of Modular Polyketide Synthases. Journal of the American Chemical Society, 1998, 120, 2478-2479. | 6.6 | 81 |
| 102 | Dissecting the Role of Acyltransferase Domains of Modular Polyketide Synthases in the Choice and Stereochemical Fate of Extender Units. Biochemistry, 1999, 38, 1643-1651. | 1.2 | 81 |
| 103 | Stereospecificity of Ketoreductase Domains of the 6-Deoxyerythronolide B Synthase. Journal of the American Chemical Society, 2007, 129, 13758-13769. | 6.6 | 81 |
| 104 | Molecular recognition between ketosynthase and acyl carrier protein domains of the 6-deoxyerythronolide B synthase. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 22066-22071. | 3.3 | 81 |
| 105 | Epothilone C Macrolactonization and Hydrolysis Are Catalyzed by the Isolated Thioesterase Domain of Epothilone Polyketide Synthase. Journal of the American Chemical Society, 2003, 125, 3428-3429. | 6.6 | 80 |
| 106 | Protein engineering of improved prolyl endopeptidases for celiac sprue therapy. Protein Engineering, Design and Selection, 2008, 21, 699-707. | 1.0 | 80 |
| 107 | Targeted gene replacements in a Streptomyces polyketide synthase gene cluster: role for the acyl carrier protein. Molecular Microbiology, 1992, 6, 3237-3249. | 1.2 | 79 |
| 108 | Gain of Function Mutagenesis of the Erythromycin Polyketide Synthase. 2. Engineered Biosynthesis of an Eight-Membered Ring Tetraketide Lactone. Journal of the American Chemical Society, 1997, 119, 11339-11340. | 6.6 | 79 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | The Biochemical Basis for Stereochemical Control in Polyketide Biosynthesis. Journal of the American Chemical Society, 2009, 131, 18501-18511. | 6.6 | 79 |
| 110 | Engineered intermodular and intramodular polyketide synthase fusions. Chemistry and Biology, 1997, 4, 667-674. | 6.2 | 78 |
| 111 | Structureâ^'Activity Relationship Analysis of the Selective Inhibition of Transglutaminase 2 by Dihydroisoxazoles. Journal of Medicinal Chemistry, 2006, 49, 7493-7501. | 2.9 | 78 |
| 112 | Structure and Mechanism of the trans-Acting Acyltransferase from the Disorazole Synthase. Biochemistry, 2011, 50, 6539-6548. | 1.2 | 78 |
| 113 | Gain-of-Function Mutagenesis of a Modular Polyketide Synthase. Journal of the American Chemical Society, 1997, 119, 4309-4310. | 6.6 | 77 |
| 114 | A Non-Human Primate Model for Gluten Sensitivity. PLoS ONE, 2008, 3, e1614. | 1.1 | 76 |
| 115 | Crystal Structure of the Priming Î²-Ketosynthase from the R1128 Polyketide Biosynthetic Pathway. Structure, 2002, 10, 1559-1568. | 1.6 | 75 |
| 116 | Design, Synthesis, and Evaluation of Gluten Peptide Analogs as Selective Inhibitors of Human Tissue Transglutaminase. Chemistry and Biology, 2003, 10, 225-231. | 6.2 | 75 |
| 117 | Kinetic and Structural Analysis of a New Group of Acyl-CoA Carboxylases Found in Streptomyces coelicolor A3(2). Journal of Biological Chemistry, 2002, 277, 31228-31236. | 1.6 | 74 |
| 118 | Inhibition of HLA-DQ2-Mediated Antigen Presentation by Analogues of a High Affinity 33-Residue Peptide from Î±2-Gliadin. Journal of the American Chemical Society, 2006, 128, 1859-1867. | 6.6 | 73 |
| 119 | Engineered biosynthesis of novel polyketides: evidence for temporal, but not regiospecific, control of cyclization of an aromatic polyketide precursor. Chemistry and Biology, 1994, 1, 205-210. | 6.2 | 72 |
| 120 | Structure-Based Dissociation of a Type I Polyketide Synthase Module. Chemistry and Biology, 2007, 14, 784-792. | 6.2 | 72 |
| 121 | Molecular Insights into the Biosynthesis of Guadinomine: A Type III Secretion System Inhibitor. Journal of the American Chemical Society, 2012, 134, 17797-17806. | 6.6 | 72 |
| 122 | Oral Enzyme Therapy for Celiac Sprue. Methods in Enzymology, 2012, 502, 241-271. | 0.4 | 72 |
| 123 | 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. | 6.6 | 71 |
| 124 | Engineered Biosynthesis of Regioselectively Modified Aromatic Polyketides Using Bimodular Polyketide Synthases. PLoS Biology, 2004, 2, e31. | 2.6 | 71 |
| 125 | Polyketide Double Bond Biosynthesis. Mechanistic Analysis of the Dehydratase-Containing Module 2 of the Picromycin/Methymycin Polyketide Synthase. Journal of the American Chemical Society, 2005, 127, 17393-17404. | 6.6 | 71 |
| 126 | Role of transglutaminase 2 in celiac disease pathogenesis. Seminars in Immunopathology, 2012, 34, 513-522. | 2.8 | 71 |

| # | Article | IF | Citations |
|---|---|---|---|
| 127 | Early non-neutralizing, afucosylated antibody responses are associated with COVID-19 severity. Science Translational Medicine, 2022, 14, eabm7853. | 5.8 | 71 |
| 128 | Fermentation, purification, formulation, and pharmacological evaluation of a prolyl endopeptidase fromMyxococcus xanthus: Implications for Celiac Sprue therapy. Biotechnology and Bioengineering, 2005, 92, 674-684. | 1.7 | 70 |
| 129 | In Vitro Reconstitution and Analysis of the 6-Deoxyerythronolide B Synthase. Journal of the American Chemical Society, 2013, 135, 16809-16812. | 6.6 | 70 |
| 130 | Mechanistic Analysis of Acyl Transferase Domain Exchange in Polyketide Synthase Modules. Journal of the American Chemical Society, 2003, 125, 5366-5374. | 6.6 | 67 |
| 131 | Mechanistic Analysis of a Type II Polyketide Synthase. Role of Conserved Residues in the Î²-Ketoacyl Synthaseâ^'Chain Length Factor Heterodimer. Biochemistry, 2000, 39, 2088-2095. | 1.2 | 66 |
| 132 | Transglutaminase 2 Regulates Mallory Body Inclusion Formation and Injury-Associated Liver Enlargement. Gastroenterology, 2007, 132, 1515-1526. | 0.6 | 66 |
| 133 | Dissecting the Chain Length Specificity in Bacterial Aromatic Polyketide Synthases using Chimeric Genes. Tetrahedron, 2000, 56, 9401-9408. | 1.0 | 65 |
| 134 | Understanding Substrate Specificity of Polyketide Synthase Modules by Generating Hybrid Multimodular Synthases. Journal of Biological Chemistry, 2003, 278, 42020-42026. | 1.6 | 65 |
| 135 | Effect of Barley Endoprotease EP-B2 on Gluten Digestion in the Intact Rat. Journal of Pharmacology and Experimental Therapeutics, 2006, 318, 1178-1186. | 1.3 | 65 |
| 136 | Evidence for partial export of Vitreoscilla hemoglobin into the periplasmic space in Escherichia coli. Journal of Molecular Biology, 1989, 210, 79-89. | 2.0 | 64 |
| 137 | A functional chimeric modular polyketide synthase generated via domain replacement. Chemistry and Biology, 1996, 3, 827-831. | 6.2 | 64 |
| 138 | Natural Product Biosynthesis:Â A New Interface between Enzymology and Medicine. Journal of Organic Chemistry, 2000, 65, 8127-8133. | 1.7 | 64 |
| 139 | Stereospecificity of the Dehydratase Domain of the Erythromycin Polyketide Synthase. Journal of the American Chemical Society, 2010, 132, 14697-14699. | 6.6 | 64 |
| 140 | Human pyrimidine nucleotide biosynthesis as a target for antiviral chemotherapy. Current Opinion in Biotechnology, 2017, 48, 127-134. | 3.3 | 64 |
| 141 | Reconstituting Modular Activity from Separated Domains of 6-Deoxyerythronolide B Synthaseâ€. Biochemistry, 2004, 43, 13892-13898. | 1.2 | 63 |
| 142 | The Loading Module of Rifamycin Synthetase Is an Adenylationâ^'Thiolation Didomain with Substrate Tolerance for Substituted Benzoates. Biochemistry, 2001, 40, 6116-6123. | 1.2 | 62 |
| 143 | Ketosynthases in the Initiation and Elongation Modules of Aromatic Polyketide Synthases Have Orthogonal Acyl Carrier Protein Specificityâ€. Biochemistry, 2003, 42, 6588-6595. | 1.2 | 62 |
| 144 | Mechanism and Specificity of an Acyltransferase Domain from a Modular Polyketide Synthase. Biochemistry, 2013, 52, 1839-1841. | 1.2 | 62 |

| # | Article | IF | Citations |
|---|---|---|---|
| 145 | Expression, Site-Directed Mutagenesis, and Steady State Kinetic Analysis of the Terminal Thioesterase Domain of the Methymycin/Picromycin Polyketide Synthaseâ€. Biochemistry, 2002, 41, 12590-12597. | 1.2 | 61 |
| 146 | Engineered Biosynthesis of Novel Polyketides: Analysis of tcmN Function in Tetracenomycin Biosynthesis. Journal of the American Chemical Society, 1995, 117, 6805-6810. | 6.6 | 60 |
| 147 | Precursor-Directed Biosynthesis of Epothilone inEscherichiacoli. Journal of the American Chemical Society, 2004, 126, 7436-7437. | 6.6 | 60 |
| 148 | Architectures of Whole-Module and Bimodular Proteins from the 6-Deoxyerythronolide B Synthase. Journal of Molecular Biology, 2014, 426, 2229-2245. | 2.0 | 60 |
| 149 | Computational identification and analysis of orphan assembly-line polyketide synthases. Journal of Antibiotics, 2014, 67, 89-97. | 1.0 | 59 |
| 150 | Thiolâ€“Disulfide Exchange Reactions in the Mammalian Extracellular Environment. Annual Review of Chemical and Biomolecular Engineering, 2016, 7, 197-222. | 3.3 | 59 |
| 151 | Acylideneoxoindoles: A new class of reversible inhibitors of human transglutaminase 2. Bioorganic and Medicinal Chemistry Letters, 2011, 21, 2692-2696. | 1.0 | 58 |
| 152 | Activation and Inhibition of Transglutaminase 2 in Mice. PLoS ONE, 2012, 7, e30642. | 1.1 | 58 |
| 153 | Latiglutenase Improves Symptoms in Seropositive Celiac Disease Patients While on a Gluten-Free Diet. Digestive Diseases and Sciences, 2017, 62, 2428-2432. | 1.1 | 58 |
| 154 | Kinetic Analysis of the Actinorhodin Aromatic Polyketide Synthase. Journal of Biological Chemistry, 1999, 274, 25108-25112. | 1.6 | 57 |
| 155 | Elevated Transglutaminase 2 Activity Is Associated with Hypoxia-Induced Experimental Pulmonary Hypertension in Mice. ACS Chemical Biology, 2014, 9, 266-275. | 1.6 | 57 |
| 156 | Rational Design and Engineered Biosynthesis of a Novel 18-Carbon Aromatic Polyketide. Journal of the American Chemical Society, 1997, 119, 635-639. | 6.6 | 56 |
| 157 | Protein-Protein Interactions, Not Substrate Recognition, Dominate the Turnover of Chimeric Assembly Line Polyketide Synthases. Journal of Biological Chemistry, 2016, 291, 16404-16415. | 1.6 | 55 |
| 158 | Remarkably broad substrate specificity of a modular polyketide synthase in a cell-free system. Journal of the American Chemical Society, 1995, 117, 11373-11374. | 6.6 | 53 |
| 159 | Precursor-Directed Biosynthesis. Chemistry and Biology, 2002, 9, 131-142. | 6.2 | 53 |
| 160 | Building-block selectivity of polyketide synthases. Current Opinion in Chemical Biology, 2003, 7, 279-284. | 2.8 | 53 |
| 161 | Precursor Directed Biosynthesis of an Orthogonally Functional Erythromycin Analogue: Selectivity in the Ribosome Macrolide Binding Pocket. Journal of the American Chemical Society, 2012, 134, 12259-12265. | 6.6 | 53 |
| 162 | Relaxed Specificity of the Oxytetracycline Polyketide Synthase for an Acetate Primer in the Absence of a Malonamyl Primer. Journal of the American Chemical Society, 1994, 116, 6443-6444. | 6.6 | 52 |

| # | Article | IF | Citations |
|---|---|---|---|
| 163 | Proteinâ^'Protein Recognition between Acyltransferases and Acyl Carrier Proteins in Multimodular Polyketide Synthases. Biochemistry, 2010, 49, 95-102. | 1.2 | 52 |
| 164 | Structureâ^'Activity Relationships within a Family of Selectively Cytotoxic Macrolide Natural Products. Organic Letters, 2001, 3, 57-59. | 2.4 | 51 |
| 165 | Enhancing the Modularity of the Modular Polyketide Synthases:â€‰ Transacylation in Modular Polyketide Synthases Catalyzed by Malonyl-CoA:ACP Transacylase. Journal of the American Chemical Society, 2003, 125, 14307-14312. | 6.6 | 51 |
| 166 | Parallels between Pathogens and Gluten Peptides in Celiac Sprue. PLoS Pathogens, 2008, 4, e34. | 2.1 | 51 |
| 167 | Use of transmission electron microscopy to identify nanocrystals of challenging protein targets. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8470-8475. | 3.3 | 51 |
| 168 | A Turnstile Mechanism for the Controlled Growth of Biosynthetic Intermediates on Assembly Line Polyketide Synthases. ACS Central Science, 2016, 2, 14-20. | 5.3 | 51 |
| 169 | Prospects for Antibacterial Discovery and Development. Journal of the American Chemical Society, 2021, 143, 21127-21142. | 6.6 | 51 |
| 170 | Substrate Specificity of the Loading Didomain of the Erythromycin Polyketide Synthaseâ€. Biochemistry, 2000, 39, 10514-10520. | 1.2 | 50 |
| 171 | Probing the interactions of an acyl carrier protein domain from the 6â€deoxyerythronolide B synthase. Protein Science, 2011, 20, 1244-1255. | 3.1 | 50 |
| 172 | Roles of Conserved Active Site Residues in the Ketosynthase Domain of an Assembly Line Polyketide Synthase. Biochemistry, 2016, 55, 4476-4484. | 1.2 | 50 |
| 173 | Selective Inhibition of Extracellular Thioredoxin by Asymmetric Disulfides. Journal of Medicinal Chemistry, 2013, 56, 1301-1310. | 2.9 | 49 |
| 174 | Erythromycin Biosynthesis:Â The Î²-Ketoreductase Domains Catalyze the Stereospecific Transfer of the 4-pro-SHydride of NADPH. Journal of the American Chemical Society, 1998, 120, 3267-3268. | 6.6 | 48 |
| 175 | Enhancing the Atom Economy of Polyketide Biosynthetic Processes through Metabolic Engineering. Biotechnology Progress, 2001, 17, 612-617. | 1.3 | 48 |
| 176 | Evidence for Transcriptional Regulation of the Glucose-6-Phosphate Transporter by HIF-1Î±: Targeting G6PT with Mumbaistatin Analogs in Hypoxic Mesenchymal Stromal Cells. Stem Cells, 2009, 27, 489-497. | 1.4 | 47 |
| 177 | Regulation of the activities of the mammalian transglutaminase family of enzymes. Protein Science, 2012, 21, 1781-1791. | 3.1 | 47 |
| 178 | Functional Orientation of the Acyltransferase Domain in a Module of the Erythromycin Polyketide Synthaseâ€. Biochemistry, 1998, 37, 2524-2528. | 1.2 | 46 |
| 179 | Precursor-Directed Biosynthesis of 16-Membered Macrolides by the Erythromycin Polyketide Synthase. Journal of the American Chemical Society, 2001, 123, 2495-2502. | 6.6 | 46 |
| 180 | Utilization of Enzymatically Phosphopantetheinylated Acyl Carrier Proteins and Acetylâ^'Acyl Carrier Proteins by the Actinorhodin Polyketide Synthaseâ€. Biochemistry, 1997, 36, 11757-11761. | 1.2 | 45 |

| # | Article | IF | Citations |
|---|---|---|---|
| 181 | Equilibrium and Kinetic Analysis of the Unusual Binding Behavior of a Highly Immunogenic Gluten Peptide to HLA-DQ2â€. Biochemistry, 2005, 44, 4442-4449. | 1.2 | 45 |
| 182 | Discovery of Potent and Specific Dihydroisoxazole Inhibitors of Human Transglutaminase 2. Journal of Medicinal Chemistry, 2014, 57, 9042-9064. | 2.9 | 45 |
| 183 | Comparative Analysis of the Substrate Specificity of trans- versus cis-Acyltransferases of Assembly Line Polyketide Synthases. Biochemistry, 2014, 53, 3796-3806. | 1.2 | 45 |
| 184 | Molecular recognition of diketide substrates by a Î²-ketoacyl-acyl carrier protein synthase domain within a bimodular polyketide synthase. Chemistry and Biology, 1997, 4, 757-766. | 6.2 | 43 |
| 185 | Precursor-directed biosynthesis of 12-ethyl erythromycin. Bioorganic and Medicinal Chemistry, 1998, 6, 1171-1177. | 1.4 | 43 |
| 186 | Intermodular Communication in Polyketide Synthases:â€‰ Comparing the Role of Proteinâ^'Protein Interactions to Those in Other Multidomain Proteins. Biochemistry, 2001, 40, 2317-2325. | 1.2 | 43 |
| 187 | Stereospecificity of Ketoreductase Domains 1 and 2 of the Tylactone Modular Polyketide Synthase. Journal of the American Chemical Society, 2008, 130, 11598-11599. | 6.6 | 43 |
| 188 | Therapeutic approaches for celiac disease. Bailliere's Best Practice and Research in Clinical Gastroenterology, 2015, 29, 503-521. | 1.0 | 43 |
| 189 | Deciphering the biosynthetic origin of the aglycone of the aureolic acid group of anti-tumor agents. Chemistry and Biology, 1996, 3, 193-196. | 6.2 | 42 |
| 190 | Primer Unit Specificity in Rifamycin Biosynthesis Principally Resides in the Later Stages of the Biosynthetic Pathway. Journal of the American Chemical Society, 1998, 120, 1092-1093. | 6.6 | 42 |
| 191 | Remarkably Broad Substrate Tolerance of Malonyl-CoA Synthetase, an Enzyme Capable of Intracellular Synthesis of Polyketide Precursors. Journal of the American Chemical Society, 2001, 123, 5822-5823. | 6.6 | 42 |
| 192 | Quantitative Analysis of Loading and Extender Acyltransferases of Modular Polyketide Synthasesâ€. Biochemistry, 2003, 42, 200-207. | 1.2 | 42 |
| 193 | Biochemical Analysis of the Substrate Specificity of the Î²-Ketoacyl-Acyl Carrier Protein Synthase Domain of Module 2 of the Erythromycin Polyketide Synthaseâ€. Biochemistry, 2004, 43, 16301-16310. | 1.2 | 42 |
| 194 | A specific role of the Saccharopolyspora erythraea thioesterase II gene in the function of modular polyketide synthases. Microbiology (United Kingdom), 2003, 149, 2213-2225. | 0.7 | 42 |
| 195 | Structure-based design of Î±-amido aldehyde containing gluten peptide analogues as modulators of HLA-DQ2 and transglutaminase 2. Bioorganic and Medicinal Chemistry, 2007, 15, 6253-6261. | 1.4 | 41 |
| 196 | Mapping the catalytic conformations of an assembly-line polyketide synthase module. Science, 2021, 374, 729-734. | 6.0 | 41 |
| 197 | Engineered Biosynthesis of Novel Polyketides: Properties of the whiE Aromatase/Cyclase. Nature Biotechnology, 1996, 14, 335-338. | 9.4 | 40 |
| 198 | Role of hypoxia-induced transglutaminase 2 in pulmonary artery smooth muscle cell proliferation. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2014, 307, L576-L585. | 1.3 | 40 |

| # | Article | IF | Citations |
|---|---|---|---|
| 199 | Transglutaminase 2 in pulmonary and cardiac tissue remodeling in experimental pulmonary hypertension. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2017, 313, L752-L762. | 1.3 | 40 |
| 200 | Efficient Synthesis of Aromatic Polyketidesin Vitroby the Actinorhodin Polyketide Synthase. Journal of the American Chemical Society, 1996, 118, 5158-5159. | 6.6 | 38 |
| 201 | Intermodular Communication in Modular Polyketide Synthases:Â Structural and Mutational Analysis of Linker Mediated Proteinâ^'Protein Recognition. Journal of the American Chemical Society, 2003, 125, 4097-4102. | 6.6 | 38 |
| 202 | Tissue Transglutaminase-Mediated Formation and Cleavage of Histamine-Gliadin Complexes: Biological Effects and Implications for Celiac Disease. Journal of Immunology, 2005, 174, 1657-1663. | 0.4 | 38 |
| 203 | Heterologous expression, purification, reconstitution and kinetic analysis of an extended type II polyketide synthase. Chemistry and Biology, 1999, 6, 607-615. | 6.2 | 37 |
| 204 | Interferon-Î³ Released by Gluten-Stimulated Celiac Disease-Specific Intestinal T Cells Enhances the Transepithelial Flux of Gluten Peptides. Journal of Pharmacology and Experimental Therapeutics, 2009, 329, 657-668. | 1.3 | 37 |
| 205 | Structureâ€"Function Analysis of the Extended Conformation of a Polyketide Synthase Module. Journal of the American Chemical Society, 2018, 140, 6518-6521. | 6.6 | 37 |
| 206 | Transepithelial Transport and Enzymatic Detoxification of Gluten in Gluten-Sensitive Rhesus Macaques. PLoS ONE, 2008, 3, e1857. | 1.1 | 37 |
| 207 | Visualization of Transepithelial Passage of the Immunogenic 33-Residue Peptide from Î±-2 Gliadin in Gluten-Sensitive Macaques. PLoS ONE, 2010, 5, e10228. | 1.1 | 37 |
| 208 | Spontaneous Priming of a Downstream Module in 6-Deoxyerythronolide B Synthase Leads to Polyketide Biosynthesis. Biochemistry, 1998, 37, 4928-4934. | 1.2 | 36 |
| 209 | Engineered Biosynthesis of Aklanonic Acid Analogues. Journal of the American Chemical Society, 2005, 127, 12254-12262. | 6.6 | 36 |
| 210 | Bioassay-Guided Evolution of Glycosylated Macrolide Antibiotics in Escherichia coli. PLoS Biology, 2007, 5, e45. | 2.6 | 36 |
| 211 | CYP3A4-Catalyzed Simvastatin Metabolism as a Non-Invasive Marker of Small Intestinal Health in Celiac Disease. American Journal of Gastroenterology, 2013, 108, 1344-1351. | 0.2 | 36 |
| 212 | Erythromycin biosynthesis. The 4-pro-S hydride of NADPH is utilized for ketoreduction by both module 5 and module 6 of the 6-deoxyerythronolide B synthase. Bioorganic and Medicinal Chemistry Letters, 2001, 11, 1477-1479. | 1.0 | 35 |
| 213 | Crystal Structure of an Acyl-ACP Dehydrogenase from the FK520 Polyketide Biosynthetic Pathway: Insights into Extender Unit Biosynthesis. Journal of Molecular Biology, 2003, 334, 435-444. | 2.0 | 35 |
| 214 | Thioredoxin-1 Selectively Activates Transglutaminase 2 in the Extracellular Matrix of the Small Intestine. Journal of Biological Chemistry, 2017, 292, 2000-2008. | 1.6 | 35 |
| 215 | Circular Dichroism and Nuclear Magnetic Resonance Spectroscopic Analysis of Immunogenic Gluten Peptides and Their Analogs. Journal of Biological Chemistry, 2002, 277, 45572-45578. | 1.6 | 34 |
| 216 | Macrolactonization to 10-deoxymethynolide catalyzed by the recombinant thioesterase of the picromycin/methymycin polyketide synthase. Bioorganic and Medicinal Chemistry Letters, 2006, 16, 391-394. | 1.0 | 34 |

| # | Article | IF | Citations |
|---|---|---|---|
| 217 | Endoplasmic reticulumâ€“resident protein 57 (ERp57) oxidatively inactivates human transglutaminase 2. Journal of Biological Chemistry, 2018, 293, 2640-2649. | 1.6 | 33 |
| 218 | Domain Analysis of the Molecular Recognition Features of Aromatic Polyketide Synthase Subunits. Journal of Biological Chemistry, 1997, 272, 16184-16188. | 1.6 | 32 |
| 219 | Main Chain Hydrogen Bond Interactions in the Binding of Proline-rich Gluten Peptides to the Celiac Disease-associated HLA-DQ2 Molecule. Journal of Biological Chemistry, 2005, 280, 21791-21796. | 1.6 | 32 |
| 220 | Malonyl-CoA:ACP Transacylase fromStreptomyces coelicolorHas Two Alternative Catalytically Active Nucleophilesâ€. Biochemistry, 2001, 40, 12407-12411. | 1.2 | 31 |
| 221 | Coupled Methyl Group Epimerization and Reduction by Polyketide Synthase Ketoreductase Domains. Ketoreductase-Catalyzed Equilibrium Isotope Exchange. Journal of the American Chemical Society, 2013, 135, 16324-16327. | 6.6 | 31 |
| 222 | Engineering of Chimeric Polyketide Synthases Using SYNZIP Docking Domains. ACS Chemical Biology, 2019, 14, 426-433. | 1.6 | 31 |
| 223 | Analysis of Covalently Bound Polyketide Intermediates on 6-Deoxyerythronolide B Synthase by Tandem Proteolysisâ^'Mass Spectrometry. Biochemistry, 2005, 44, 11836-11842. | 1.2 | 30 |
| 224 | Chemistry and Biology of Macrolide Antiparasitic Agents. Journal of Medicinal Chemistry, 2011, 54, 2792-2804. | 2.9 | 30 |
| 225 | Interferon-Î³ Activates Transglutaminase 2 via a Phosphatidylinositol-3-Kinase-Dependent Pathway: Implications for Celiac Sprue Therapy. Journal of Pharmacology and Experimental Therapeutics, 2012, 341, 104-114. | 1.3 | 30 |
| 226 | Characterization of transglutaminase type II role in dendritic cell differentiation and function. Journal of Leukocyte Biology, 2010, 88, 181-188. | 1.5 | 29 |
| 227 | Gluten Introduction, Breastfeeding, and Celiac Disease: Back to the Drawing Board. American Journal of Gastroenterology, 2016, 111, 12-14. | 0.2 | 29 |
| 228 | Engineered Biosynthesis of Novel Polyketides:Â Regiospecific Methylation of an Unnatural Substrate by the tcmOO-Methyltransferaseâ€. Biochemistry, 1996, 35, 6527-6532. | 1.2 | 28 |
| 229 | Mechanism based protein crosslinking of domains from the 6-deoxyerythronolide B synthase. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 3034-3038. | 1.0 | 28 |
| 230 | The initiation ketosynthase (FabH) is the sole rate-limiting enzyme of the fatty acid synthase of Synechococcus sp. PCC 7002. Metabolic Engineering, 2014, 22, 53-59. | 3.6 | 28 |
| 231 | Elucidation of the Cryptic Epimerase Activity of Redox-Inactive Ketoreductase Domains from Modular Polyketide Synthases by Tandem Equilibrium Isotope Exchange. Journal of the American Chemical Society, 2014, 136, 10190-10193. | 6.6 | 28 |
| 232 | Synthesis and Incorporation of anN-Acetylcysteamine Analogue of Methylmalonyl-CoA by a Modular Polyketide Synthase. Journal of the American Chemical Society, 1998, 120, 11206-11207. | 6.6 | 27 |
| 233 | Cystamine and Disulfiram Inhibit Human Transglutaminase 2 via an Oxidative Mechanism. Biochemistry, 2018, 57, 3359-3363. | 1.2 | 27 |
| 234 | Complete Reconstitution and Deorphanization of the 3 MDa Nocardiosis-Associated Polyketide Synthase. Journal of the American Chemical Society, 2020, 142, 5952-5957. | 6.6 | 27 |

| # | Article | IF | Citations |
|---|---|---|---|
| 235 | Tolerance and Specificity of Recombinant 6-Methylsalicylic Acid Synthase. Metabolic Engineering, 1999, 1, 180-187. | 3.6 | 26 |
| 236 | The Loading and Initial Elongation Modules of Rifamycin Synthetase Collaborate To Produce Mixed Aryl Ketide Productsâ€. Biochemistry, 2002, 41, 5313-5324. | 1.2 | 26 |
| 237 | In Vivo and In Vitro Analysis of the Hedamycin Polyketide Synthase. Chemistry and Biology, 2009, 16, 1197-1207. | 6.2 | 26 |
| 238 | In Living Color: Bacterial Pigments as an Untapped Resource in the Classroom and Beyond. PLoS Biology, 2010, 8, e1000510. | 2.6 | 26 |
| 239 | Stereochemistry of Reductions Catalyzed by Methyl-Epimerizing Ketoreductase Domains of Polyketide Synthases. Journal of the American Chemical Society, 2013, 135, 7406-7409. | 6.6 | 26 |
| 240 | In Vitro Reconstitution of Metabolic Pathways: Insights into Natureâ€™s Chemical Logic. Synlett, 2015, 26, 1008-1025. | 1.0 | 26 |
| 241 | Erythromycin biosynthesis: Exploiting the catalytic versatility of the modular polyketide synthase. Bioorganic and Medicinal Chemistry, 1996, 4, 995-999. | 1.4 | 25 |
| 242 | Precursor-Directed polyketide biosynthesis in Escherichia coli. Bioorganic and Medicinal Chemistry Letters, 2003, 13, 3701-3704. | 1.0 | 25 |
| 243 | Expression and Kinetic Analysis of the Substrate Specificity of Modules 5 and 6 of the Picromycin/Methymycin Polyketide Synthase. Journal of the American Chemical Society, 2003, 125, 5671-5676. | 6.6 | 25 |
| 244 | Role of a Conserved Arginine Residue in Linkers between the Ketosynthase and Acyltransferase Domains of Multimodular Polyketide Synthases. Biochemistry, 2012, 51, 3708-3710. | 1.2 | 25 |
| 245 | Erythromycin Biosynthesis. Highly Efficient Incorporation of Polyketide Chain Elongation Intermediates into 6-Deoxyerythronolide B in an Engineered Streptomyces Host.. Journal of Antibiotics, 1995, 48, 647-651. | 1.0 | 24 |
| 246 | 6-Deoxyerythronolide B Synthase 1 Is Specifically Acylated by a Diketide Intermediate at the Î²-Ketoacyl-Acyl Carrier Protein Synthase Domain of Module 2â€. Biochemistry, 1996, 35, 15244-15248. | 1.2 | 24 |
| 247 | Low-Dose Gluten Challenge in Celiac Sprue: Malabsorptive and Antibody Responses. Clinical Gastroenterology and Hepatology, 2005, 3, 679-686. | 2.4 | 24 |
| 248 | Gluten-sensitive enteropathy coincides with decreased capability of intestinal T cells to secrete IL-17 and IL-22 in a macaque model for celiac disease. Clinical Immunology, 2013, 147, 40-49. | 1.4 | 24 |
| 249 | Partial In Vitro Reconstitution of an Orphan Polyketide Synthase Associated with Clinical Cases of Nocardiosis. ACS Chemical Biology, 2016, 11, 2636-2641. | 1.6 | 24 |
| 250 | Latiglutenase treatment for celiac disease: symptom and quality of life improvement for seropositive patients on a glutenâ€free diet. GastroHep, 2019, 1, 293-301. | 0.3 | 24 |
| 251 | Substrates, inhibitors, and probes of mammalian transglutaminase 2. Analytical Biochemistry, 2020, 591, 113560. | 1.1 | 24 |
| 252 | SARS-CoV-2 Subgenomic RNA Kinetics in Longitudinal Clinical Samples. Open Forum Infectious Diseases, 2021, 8, ofab310. | 0.4 | 24 |

| # | Article | IF | Citations |
|---|---|---|---|
| 253 | Genes for Polyketide Secondary Metabolic Pathways in Microorganisms and Plants. Novartis Foundation Symposium, 1992, 171, 88-112. | 1.2 | 24 |
| 254 | Precursor directed biosynthesis of novel 6-deoxyerythronolide B analogs containing non-natural oxygen substituents and reactive functionalities. Tetrahedron Letters, 1999, 40, 635-638. | 0.7 | 23 |
| 255 | Metabolic Flux between Unsaturated and Saturated Fatty Acids Is Controlled by the FabA:FabB Ratio in the Fully Reconstituted Fatty Acid Biosynthetic Pathway ofEscherichia coli. Biochemistry, 2013, 52, 8304-8312. | 1.2 | 23 |
| 256 | Epimerase and Reductase Activities of Polyketide Synthase Ketoreductase Domains Utilize the Same Conserved Tyrosine and Serine Residues. Biochemistry, 2016, 55, 1179-1186. | 1.2 | 23 |
| 257 | Enhancing the Antiviral Efficacy of RNA-Dependent RNA Polymerase Inhibition by Combination with Modulators of Pyrimidine Metabolism. Cell Chemical Biology, 2020, 27, 668-677.e9. | 2.5 | 23 |
| 258 | Engineering site-selective incorporation of fluorine into polyketides. Nature Chemical Biology, 2022, 18, 886-893. | 3.9 | 23 |
| 259 | A Switch for the Transfer of Substrate between Nonribosomal Peptide and Polyketide Modules of the Rifamycin Synthetase Assembly Line. Journal of the American Chemical Society, 2003, 125, 13664-13665. | 6.6 | 22 |
| 260 | A scaleable manufacturing process for pro-EP-B2, a cysteine protease from barley indicated for celiac sprue. Biotechnology and Bioengineering, 2007, 98, 177-185. | 1.7 | 22 |
| 261 | Dihydroisoxazole Analogs for Labeling andÂVisualization of Catalytically Active Transglutaminase 2. Chemistry and Biology, 2011, 18, 58-66. | 6.2 | 22 |
| 262 | Biosynthesis and structureâ€“activity relationships of the lipid a family of glycolipids. Current Opinion in Chemical Biology, 2017, 40, 127-137. | 2.8 | 22 |
| 263 | New directions in metabolic engineering. Current Opinion in Chemical Biology, 1998, 2, 133-137. | 2.8 | 21 |
| 264 | Investigating Nonribosomal Peptide and Polyketide Biosynthesis by Direct Detection of Intermediates on >70 kDa Polypeptides by Using Fourier-Transform Mass Spectrometry. ChemBioChem, 2006, 7, 904-907. | 1.3 | 21 |
| 265 | Generation of food-grade recombinant Lactobacillus casei delivering Myxococcus xanthus prolyl endopeptidase. Applied Microbiology and Biotechnology, 2014, 98, 6689-6700. | 1.7 | 21 |
| 266 | Cloning, Sequencing, Heterologous Expression, and Mechanistic Analysis of A-74528 Biosynthesis. Journal of the American Chemical Society, 2010, 132, 9122-9128. | 6.6 | 20 |
| 267 | Real-Time in Vivo Detection of H<sub>2</sub>O<sub>2</sub> Using Hyperpolarized <sup>13</sup>C-Thiourea. ACS Chemical Biology, 2017, 12, 1737-1742. | 1.6 | 20 |
| 268 | The Conformational Flexibility of the Acyltransferase from the Disorazole Polyketide Synthase Is Revealed by an X-ray Free-Electron Laser Using a Room-Temperature Sample Delivery Method for Serial Crystallography. Biochemistry, 2017, 56, 4751-4756. | 1.2 | 20 |
| 269 | Interleukin 4 is inactivated via selective disulfide-bond reduction by extracellular thioredoxin. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8781-8786. | 3.3 | 20 |
| 270 | CHEMISTRY: A New Route to Designer Antibiotics. Science, 2005, 308, 367-368. | 6.0 | 19 |

| # | Article | IF | Citations |
|---|---|---|---|
| 271 | Antibiotic production from the ground up. Nature Biotechnology, 2007, 25, 428-429. | 9.4 | 19 |
| 272 | Tissue transgluaminase 2 expression in meningiomas. Journal of Neuro-Oncology, 2008, 90, 125-132. | 1.4 | 19 |
| 273 | Improved precursor-directed biosynthesis in E. coli via directed evolution. Journal of Antibiotics, 2011, 64, 59-64. | 1.0 | 19 |
| 274 | Elucidation of the Stereospecificity of C-Methyltransferases from trans-AT Polyketide Synthases. Journal of the American Chemical Society, 2017, 139, 6102-6105. | 6.6 | 19 |
| 275 | Specificity and versatility in erythromycin biosynthesis. Chemical Society Reviews, 1996, 25, 297. | 18.7 | 18 |
| 276 | Dissecting the Evolutionary Relationship between 14-Membered and 16-Membered Macrolides. Journal of the American Chemical Society, 1998, 120, 9096-9097. | 6.6 | 18 |
| 277 | Mechanism and Engineering of Polyketide Chain Initiation in Fredericamycin Biosynthesis. Journal of the American Chemical Society, 2010, 132, 8831-8833. | 6.6 | 18 |
| 278 | Mechanism and Stereochemistry of Polyketide Chain Elongation and Methyl Group Epimerization in Polyether Biosynthesis. Journal of the American Chemical Society, 2017, 139, 3283-3292. | 6.6 | 18 |
| 279 | Elucidation of the Cryptic Methyl Group Epimerase Activity of Dehydratase Domains from Modular Polyketide Synthases Using a Tandem Modules Epimerase Assay. Journal of the American Chemical Society, 2017, 139, 9507-9510. | 6.6 | 18 |
| 280 | Precursor-Directed Biosynthesis: Stereospecificity for Branched-Chain Diketides of theÎ²-Ketoacyl-ACP Synthase Domain 2 of 6-Deoxyerythronolide B Synthase. Helvetica Chimica Acta, 2003, 86, 3889-3907. | 1.0 | 17 |
| 281 | Reconstitution and Characterization of a New Desosaminyl Transferase, EryCIII, from the Erythromycin Biosynthetic Pathway. Journal of the American Chemical Society, 2004, 126, 9924-9925. | 6.6 | 17 |
| 282 | Manipulation and Analysis of Polyketide Synthases. Methods in Enzymology, 2004, 388, 269-293. | 0.4 | 17 |
| 283 | A Balancing Act for Taxol Precursor Pathways in E. coli. Science, 2010, 330, 44-45. | 6.0 | 17 |
| 284 | Natural product inhibitors of glucose-6-phosphate translocase. MedChemComm, 2012, 3, 926. | 3.5 | 17 |
| 285 | Engineered biosynthesis of the antiparasitic agent frenolicin B and rationally designed analogs in a heterologous host. Journal of Antibiotics, 2011, 64, 759-762. | 1.0 | 16 |
| 286 | Analysis of the Ketosynthase-Chain Length Factor Heterodimer from the Fredericamycin Polyketide Synthase. Chemistry and Biology, 2011, 18, 1021-1031. | 6.2 | 16 |
| 287 | An efficient urine peptidomics workflow identifies chemically defined dietary gluten peptides from patients with celiac disease. Nature Communications, 2022, 13, 888. | 5.8 | 16 |
| 288 | Evolutionally guided enzyme design. , 1996, 52, 122-128. | | 15 |

| # | Article | IF | Citations |
|---|---|---|---|
| 289 | Directed Transfer of Large DNA Fragments between Streptomyces Species. Applied and Environmental Microbiology, 2000, 66, 2274-2277. | 1.4 | 15 |
| 290 | Structureâ€“activity relationships of semisynthetic mumbaistatin analogs. Bioorganic and Medicinal Chemistry, 2007, 15, 5207-5218. | 1.4 | 15 |
| 291 | Synthesis and Biological Activity of Novel Pyranopyrones Derived from Engineered Aromatic Polyketides. ACS Chemical Biology, 2007, 2, 104-108. | 1.6 | 15 |
| 292 | Novel chemo-sensitizing agent, ERW1227B, impairs cellular motility and enhances cell death in glioblastomas. Journal of Neuro-Oncology, 2011, 103, 207-219. | 1.4 | 15 |
| 293 | Recognition of acyl carrier proteins by ketoreductases in assembly line polyketide synthases. Journal of Antibiotics, 2016, 69, 507-510. | 1.0 | 15 |
| 294 | A hostâ€“vector system for analysis and manipulation of rifamycin polyketide biosynthesis in Amycolatopsis mediterranei. Microbiology (United Kingdom), 1999, 145, 2335-2341. | 0.7 | 15 |
| 295 | Exploring the biosynthetic potential of bimodular aromatic polyketide synthases. Tetrahedron, 2004, 60, 7659-7671. | 1.0 | 14 |
| 296 | Pharmacologic transglutaminase inhibition attenuates drug-primed liver hypertrophy but not Mallory body formation. FEBS Letters, 2006, 580, 2351-2357. | 1.3 | 14 |
| 297 | Inhibition of Tubulogenesis and of Carcinogenâ€mediated Signaling in Brain Endothelial Cells Highlight the Antiangiogenic Properties of a Mumbaistatin Analog. Chemical Biology and Drug Design, 2010, 75, 481-488. | 1.5 | 14 |
| 298 | Discovery of small molecule inhibitors of human uridine-cytidine kinase 2 by high-throughput screening. Bioorganic and Medicinal Chemistry Letters, 2019, 29, 2559-2564. | 1.0 | 14 |
| 299 | Solution Structure and Conformational Flexibility of a Polyketide Synthase Module. Jacs Au, 2021, 1, 2162-2171. | 3.6 | 14 |
| 300 | Noninflammatory Gluten Peptide Analogs as Biomarkers for Celiac Sprue. Chemistry and Biology, 2009, 16, 868-881. | 6.2 | 13 |
| 301 | Quo vadis, enzymology?. Nature Chemical Biology, 2015, 11, 438-441. | 3.9 | 13 |
| 302 | A B-Cell Gene Signature Correlates With the Extent of Gluten-Induced Intestinal Injury in Celiac Disease. Cellular and Molecular Gastroenterology and Hepatology, 2017, 4, 1-17. | 2.3 | 13 |
| 303 | GRINS: Genetic elements that recode assembly-line polyketide synthases and accelerate their diversification. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 13 |
| 304 | Antibiotic activity of polyketide products derived from combinatorial biosynthesis: Implications for directed evolution. Molecular Diversity, 1996, 1, 121-124. | 2.1 | 11 |
| 305 | Chain Elongation, Macrolactonization, and Hydrolysis of Natural and Reduced Hexaketide Substrates by the Picromycin/Methymycin Polyketide Synthase. Angewandte Chemie - International Edition, 2005, 44, 7557-7560. | 7.2 | 11 |
| 306 | Stereochemical Assignment of Intermediates in the Rifamycin Biosynthetic Pathway by Precursor-Directed Biosynthesis. Journal of the American Chemical Society, 2005, 127, 11202-11203. | 6.6 | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 307 | Combinatorial chemistry and biology: an opportunity for engineers. Current Opinion in Biotechnology, 1996, 7, 219-222. | 3.3 | 10 |
| 308 | Engineered biosynthesis of polyketides in heterologous hosts. Chemical Engineering Science, 2004, 59, 4693-4701. | 1.9 | 10 |
| 309 | In vitro and in vivo activity of frenolicin B against Plasmodium falciparum and P berghei. Journal of Antibiotics, 2011, 64, 799-801. | 1.0 | 10 |
| 310 | Dihydroisoxazole inhibitors of Anopheles gambiae seminal transglutaminase AgTG3. Malaria Journal, 2014, 13, 210. | 0.8 | 10 |
| 311 | A genome-wide analysis of targets of macrolide antibiotics in mammalian cells. Journal of Biological Chemistry, 2020, 295, 2057-2067. | 1.6 | 10 |
| 312 | An unprecedented dual antagonist and agonist of human Transglutaminase 2. Bioorganic and Medicinal Chemistry Letters, 2015, 25, 4922-4926. | 1.0 | 9 |
| 313 | Orthogonal Protein Interactions in Spore Pigment Producing and Antibiotic Producing Polyketide Synthases. Journal of Antibiotics, 2005, 58, 663-666. | 1.0 | 8 |
| 314 | Fit for an enzyme. Nature, 2008, 454, 832-833. | 13.7 | 8 |
| 315 | Resolving Multiple Proteinâ€“Peptide Binding Events: Implication for HLAâ€DQ2 Mediated Antigen Presentation in Celiac Disease. Chemistry - an Asian Journal, 2012, 7, 992-999. | 1.7 | 8 |
| 316 | Analysis and Refactoring of the A-74528 Biosynthetic Pathway. Journal of the American Chemical Society, 2013, 135, 3752-3755. | 6.6 | 8 |
| 317 | Celiac Disease: Lessons for and from Chemical Biology. ACS Chemical Biology, 2017, 12, 1455-1459. | 1.6 | 8 |
| 318 | Heterologous expression of diverse propionyl-CoA carboxylases affects polyketide production in Escherichia coli. Journal of Antibiotics, 2017, 70, 859-863. | 1.0 | 8 |
| 319 | Antibody Probes of Module 1 of the 6-Deoxyerythronolide B Synthase Reveal an Extended Conformation During Ketoreduction. Journal of the American Chemical Society, 2020, 142, 14933-14939. | 6.6 | 8 |
| 320 | Discovery and Characterization of a Thioesterase-Specific Monoclonal Antibody That Recognizes the 6-Deoxyerythronolide B Synthase. Biochemistry, 2018, 57, 6201-6208. | 1.2 | 7 |
| 321 | Engineering of Novel Polyketides.. Annals of the New York Academy of Sciences, 1996, 799, 32-45. | 1.8 | 6 |
| 322 | Biochemistryâ€”engineering interface in biochemical engineering. AICHE Journal, 2002, 48, 1366-1368. | 1.8 | 5 |
| 323 | Trapping Transient Proteinâ€“Protein Interactions in Polyketide Biosynthesis. ACS Chemical Biology, 2006, 1, 679-680. | 1.6 | 5 |
| 324 | Tunable Enzymatic Synthesis of the Immunomodulator Lipid IV<sub>A</sub> To Enable Structureâ€“Activity Analysis. Journal of the American Chemical Society, 2019, 141, 9474-9478. | 6.6 | 5 |

| # | Article | IF | Citations |
|---|---|---|---|
| 325 | The COVID-19 Outpatient Pragmatic Platform Study (COPPS): Study design of a multi-center pragmatic platform trial. Contemporary Clinical Trials, 2021, 108, 106509. | 0.8 | 5 |
| 326 | Efficient Sampling of Protein Sequence Space for Multiple Mutants. Bio/technology, 1994, 12, 517-520. | 1.9 | 4 |
| 327 | Just add chlorine. Nature, 2005, 436, 1094-1095. | 13.7 | 4 |
| 328 | Modular polyketide synthases: Investigating intermodular communication using 6 deoxyerythronolide B synthase module 2. Bioorganic and Medicinal Chemistry Letters, 2006, 16, 213-216. | 1.0 | 4 |
| 329 | Properties of a â€œSplit-and-Stutteringâ€•Module of an Assembly Line Polyketide Synthase. Journal of Organic Chemistry, 2021, 86, 11100-11106. | 1.7 | 4 |
| 330 | Discovery and Mechanism of Typeâ€…III Secretion System Inhibitors. Israel Journal of Chemistry, 2013, 53, 577-587. | 1.0 | 4 |
| 331 | Engineering of molecular and cellular biocatalysts: Selected contributions by James E. Bailey. Biotechnology and Bioengineering, 2002, 79, 490-495. | 1.7 | 3 |
| 332 | Cholestyramine as a promising, strong anion exchange resin for direct capture of genetic biomarkers from raw pancreatic fluids. Biotechnology and Bioengineering, 2017, 114, 934-938. | 1.7 | 3 |
| 333 | From Active Sites to Machines: A Challenge for Enzyme Chemists. Israel Journal of Chemistry, 2019, 59, 37-40. | 1.0 | 3 |
| 334 | Challenges and opportunities for engineering assembly-line polyketide biosynthesis in Escherichia coli. Metabolic Engineering Communications, 2020, 10, e00106. | 1.9 | 3 |
| 335 | An Unusual â€œORâ€•Gate for Allosteric Regulation of Mammalian Transglutaminase 2 in the Extracellular Matrix. Journal of the American Chemical Society, 2021, 143, 10537-10540. | 6.6 | 3 |
| 336 | Fragment antigen binding domains (Fabs) as tools to study assembly-line polyketide synthases. Synthetic and Systems Biotechnology, 2022, 7, 506-512. | 1.8 | 3 |
| 337 | The Convergence of Chemistry & Human Biology. Daedalus, 2014, 143, 43-48. | 0.9 | 2 |
| 338 | Intracellular TG2 Activity Increases Microtubule Stability but is not Sufficient to Prompt Neurite Growth. Neuroscience Bulletin, 2017, 33, 103-106. | 1.5 | 2 |
| 339 | In Vivo Measurement of Redox-Regulated TG2 Activity. Methods in Molecular Biology, 2019, 1967, 263-274. | 0.4 | 2 |
| 340 | Structure and Mechanism of the Ketosynthase-Chain Length Factor Didomain from a Prototypical Polyunsaturated Fatty Acid Synthase. Biochemistry, 2020, 59, 4735-4743. | 1.2 | 2 |
| 341 | 50 Years Ago in T J P. Journal of Pediatrics, 2021, 230, 70. | 0.9 | 2 |
| 342 | Modular biocatalysts. AICHE Journal, 2009, 55, 1926-1929. | 1.8 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 343 | Thematic Minireview Series on Antibacterial Natural Products: New Tricks for Old Dogs. Journal of Biological Chemistry, 2010, 285, 27499. | 1.6 | 1 |
| 344 | Engineering Escherichia coli for Biotransformation of Biomass into Fatty Acid Derived Fuels. Current Chemical Biology, 2012, 6, 7-13. | 0.2 | 1 |
| 345 | A tribute to Professor Jay Bailey: A pioneer in biochemical engineering. AICHE Journal, 2018, 64, 4179-4181. | 1.8 | 1 |
| 346 | Characterization of Natural Product Biosynthetic Pathways by In Vitro Reconstitution. , 2020, , 307-317. | | 1 |
| 347 | A New Route to Designer Antibiotics. ChemInform, 2005, 36, no. | 0.1 | 0 |
| 348 | Engineering Escherichia coli for Biotransformation of Biomass into Fatty Acid Derived Fuels. Current Chemical Biology, 2012, 6, 7-13. | 0.2 | 0 |
| 349 | The Stanford Institute for Chemical Biology. ACS Chemical Biology, 2013, 8, 1860-1861. | 1.6 | 0 |
| 350 | Editorial overview: Next-generation therapeutics: Breaking new ground and making a difference for patients. Current Opinion in Chemical Biology, 2016, 32, 58-59. | 2.8 | 0 |
| 351 | A Tribute to James E. Bailey. AICHE Journal, 2018, 64, 4178-4178. | 1.8 | 0 |
| 352 | Structure, Mechanism and Engineering of Polyketide Synthases. FASEB Journal, 2006, 20, A1472. | 0.2 | 0 |
| 353 | The Diversity of Nuclear Magnetic Resonance Spectroscopy. NATO Science for Peace and Security Series B: Physics and Biophysics, 2009, , 65-81. | 0.2 | 0 |