

# Kira J Weissman

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3838110/publications.pdf>

Version: 2024-02-01

69  
papers

5,786  
citations

109137

35  
h-index

106150

65  
g-index

74  
all docs

74  
docs citations

74  
times ranked

4400  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polyketide biosynthesis: a millennium review. <i>Natural Product Reports</i> , 2001, 18, 380-416.	5.2	1,454
2	Towards the sustainable discovery and development of new antibiotics. <i>Nature Reviews Chemistry</i> , 2021, 5, 726-749.	13.8	439
3	Combinatorial biosynthesis of reduced polyketides. <i>Nature Reviews Microbiology</i> , 2005, 3, 925-936.	13.6	417
4	Complete genome sequence of the myxobacterium <i>Sorangium cellulosum</i> . <i>Nature Biotechnology</i> , 2007, 25, 1281-1289.	9.4	354
5	Myxobacterial secondary metabolites: bioactivities and modes-of-action. <i>Natural Product Reports</i> , 2010, 27, 1276.	5.2	263
6	The Structure of Docking Domains in Modular Polyketide Synthases. <i>Chemistry and Biology</i> , 2003, 10, 723-731.	6.2	185
7	The structural biology of biosynthetic megaenzymes. <i>Nature Chemical Biology</i> , 2015, 11, 660-670.	3.9	178
8	Genetic engineering of modular PKSs: from combinatorial biosynthesis to synthetic biology. <i>Natural Product Reports</i> , 2016, 33, 203-230.	5.2	130
9	Protein-Protein Interactions in Multienzyme Megasyntetases. <i>ChemBioChem</i> , 2008, 9, 826-848.	1.3	118
10	A brief tour of myxobacterial secondary metabolism. <i>Bioorganic and Medicinal Chemistry</i> , 2009, 17, 2121-2136.	1.4	113
11	Insights into Polyether Biosynthesis from Analysis of the Nigericin Biosynthetic Gene Cluster in <i>Streptomyces</i> sp. DSM4137. <i>Chemistry and Biology</i> , 2007, 14, 703-714.	6.2	103
12	Molecular Basis of Celmer's Rules: Stereochemistry of Catalysis by Isolated Ketoreductase Domains from Modular Polyketide Synthases. <i>Chemistry and Biology</i> , 2005, 12, 1145-1153.	6.2	101
13	The Molecular Basis of Celmer's Rules: The Stereochemistry of the Condensation Step in Chain Extension on the Erythromycin Polyketide Synthase. <i>Biochemistry</i> , 1997, 36, 13849-13855.	1.2	93
14	Mutasynthesis - uniting chemistry and genetics for drug discovery. <i>Trends in Biotechnology</i> , 2007, 25, 139-142.	4.9	90
15	Chapter 1 Introduction to Polyketide Biosynthesis. <i>Methods in Enzymology</i> , 2009, 459, 3-16.	0.4	90
16	Pretubulysin, a Potent and Chemically Accessible Tubulysin Precursor from <i>Angiococcus disciformis</i> . <i>Angewandte Chemie - International Edition</i> , 2009, 48, 4422-4425.	7.2	81
17	Multienzyme docking in hybrid megasyntetases. <i>Nature Chemical Biology</i> , 2008, 4, 75-81.	3.9	80
18	Myxochelin Biosynthesis: Direct Evidence for Two- and Four-Electron Reduction of a Carrier Protein-Bound Thioester. <i>Journal of the American Chemical Society</i> , 2008, 130, 7554-7555.	6.6	66

#	ARTICLE	IF	CITATIONS
19	Uncovering the structures of modular polyketide synthases. <i>Natural Product Reports</i> , 2015, 32, 436-453.	5.2	66
20	Identification of a Phosphopantetheinyl Transferase for Erythromycin Biosynthesis in <i>Saccharopolyspora erythraea</i> . <i>ChemBioChem</i> , 2004, 5, 116-125.	1.3	64
21	Analysis of the Sorangicin Gene Cluster Reinforces the Utility of a Combined Phylogenetic/Retrobiosynthetic Analysis for Deciphering Natural Product Assembly by <i>trans</i> -AT PKS. <i>ChemBioChem</i> , 2010, 11, 1840-1849.	1.3	64
22	The Structural Basis for Docking in Modular Polyketide Biosynthesis. <i>ChemBioChem</i> , 2006, 7, 485-494.	1.3	62
23	DKxanthene Biosynthesis—Understanding the Basis for Diversity-Oriented Synthesis in Myxobacterial Secondary Metabolism. <i>Chemistry and Biology</i> , 2008, 15, 771-781.	6.2	60
24	Discovery of 23 Natural Tubulysins from <i>Angiococcus disciformis</i> An d48 and <i>Cystobacter</i> SBCb004. <i>Chemistry and Biology</i> , 2010, 17, 296-309.	6.2	57
25	Heterologous Expression and Genetic Engineering of the Tubulysin Biosynthetic Gene Cluster Using Red/ET Recombineering and Inactivation Mutagenesis. <i>Chemistry and Biology</i> , 2012, 19, 361-371.	6.2	57
26	Biosynthesis of Thuggacins in Myxobacteria: Comparative Cluster Analysis Reveals Basis for Natural Product Structural Diversity. <i>Chemistry and Biology</i> , 2010, 17, 342-356.	6.2	54
27	Unusual Chemistry in the Biosynthesis of the Antibiotic Chondrochlorens. <i>Chemistry and Biology</i> , 2009, 16, 70-81.	6.2	50
28	The Thioesterase of the Erythromycin-Producing Polyketide Synthase: Influence of Acyl Chain Structure on the Mode of Release of Substrate Analogues from the Acyl Enzyme Intermediates. <i>Angewandte Chemie - International Edition</i> , 1998, 37, 1437-1440.	7.2	47
29	Biosynthesis of (R)- $\beta^2$ -Tyrosine and Its Incorporation into the Highly Cytotoxic Chondramides Produced by <i>Chondromyces crocatus</i> . <i>Journal of Biological Chemistry</i> , 2007, 282, 21810-21817.	1.6	46
30	Evaluating precursor-directed biosynthesis towards novel erythromycins through in vitro studies on a bimodular polyketide synthase. <i>Chemistry and Biology</i> , 1998, 5, 743-754.	6.2	44
31	Production of the Antifungal Isochromanone Ajudazols A and B in <i>Chondromyces crocatus</i> : C <sub>5</sub> Biosynthetic Machinery and Cytochrome P450 Modifications. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 4595-4599.	7.2	42
32	Characterization of Intersubunit Communication in the Virginiamycin <i>trans</i> -Acyl Transferase Polyketide Synthase. <i>Journal of the American Chemical Society</i> , 2016, 138, 4155-4167.	6.6	42
33	Polyketide biosynthesis: understanding and exploiting modularity. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2004, 362, 2671-2690.	1.6	41
34	Insights into Protein-Protein and Enzyme-Substrate Interactions in Modular Polyketide Synthases. <i>Chemistry and Biology</i> , 2010, 17, 705-716.	6.2	41
35	Ketoreduction in Mycolactone Biosynthesis: Insight into Substrate Specificity and Stereocontrol from Studies of Discrete Ketoreductase Domains in vitro. <i>ChemBioChem</i> , 2006, 7, 1935-1942.	1.3	36
36	An Unusual Thioesterase Promotes Isochromanone Ring Formation in Ajudazol Biosynthesis. <i>ChemBioChem</i> , 2010, 11, 1137-1146.	1.3	35

#	ARTICLE	IF	CITATIONS
37	Insights into the complex biosynthesis of the leupyrrins in <i>Sorangium cellulosum</i> So ce690. <i>Molecular BioSystems</i> , 2011, 7, 1549.	2.9	35
38	Polyketide stereocontrol: a study in chemical biology. <i>Beilstein Journal of Organic Chemistry</i> , 2017, 13, 348-371.	1.3	35
39	Broad Substrate Specificity of Ketoreductases Derived from Modular Polyketide Synthases. <i>ChemBioChem</i> , 2006, 7, 478-484.	1.3	33
40	Insights into the function of trans-acyl transferase polyketide synthases from the SAXS structure of a complete module. <i>Chemical Science</i> , 2014, 5, 3081-3095.	3.7	33
41	Improved Catalytic Activity of a Purified Multienzyme from a Modular Polyketide Synthase after Coexpression with <i>Streptomyces</i> Chaperonins in <i>Escherichia coli</i> . <i>ChemBioChem</i> , 2008, 9, 2962-2966.	1.3	32
42	Evaluating Ketoreductase Exchanges as a Means of Rationally Altering Polyketide Stereochemistry. <i>ChemBioChem</i> , 2015, 16, 1357-1364.	1.3	32
43	Origin of Starter Units for Erythromycin Biosynthesis. <i>Biochemistry</i> , 1998, 37, 11012-11017.	1.2	31
44	Evidence for a Protein-Protein Interaction Motif on an Acyl Carrier Protein Domain from a Modular Polyketide Synthase. <i>Chemistry and Biology</i> , 2006, 13, 625-636.	6.2	31
45	Evidence for the Mode of Action of the Highly Cytotoxic <i>Streptomyces</i> Polyketide Kendomycin. <i>ChemBioChem</i> , 2007, 8, 1261-1272.	1.3	28
46	Covalent Linkage Mediates Communication between ACP and TE Domains in Modular Polyketide Synthases. <i>ChemBioChem</i> , 2008, 9, 905-915.	1.3	26
47	Heterometallic and homometallic ruthenium and osmium double bonds in metalloporphyrin and metallotetraazaporphyrin dimers. <i>Journal of the American Chemical Society</i> , 1993, 115, 9309-9310.	6.6	23
48	Single Amino Acid Substitutions Alter the Efficiency of Docking in Modular Polyketide Biosynthesis. <i>ChemBioChem</i> , 2006, 7, 1334-1342.	1.3	21
49	Heterometallic mixed triad multiple bonds in metal-porphyrin dimers. <i>Journal of the American Chemical Society</i> , 1994, 116, 9761-9762.	6.6	20
50	Efficient purification and kinetic characterization of a bimodular derivative of the erythromycin polyketide synthase. <i>FEBS Journal</i> , 2000, 267, 520-526.	0.2	17
51	Insights into a dual function amide oxidase/macrocyclase from lankacidin biosynthesis. <i>Nature Communications</i> , 2018, 9, 3998.	5.8	17
52	Insights into Multienzyme Docking in Hybrid PKS-NRPS Megasyntetases Revealed by Heterologous Expression and Genetic Engineering. <i>ChemBioChem</i> , 2010, 11, 1069-1075.	1.3	14
53	Structural elucidation studies of polyketide tetrasubstituted $\beta$ -lactones by gas chromatography/tandem mass spectrometry and electrospray mass spectrometry. <i>Journal of the American Chemical Society</i> , 1999, 121, 2103-2108.		9
54	Autonomous folding of interdomain regions of a modular polyketide synthase. <i>FEBS Journal</i> , 2007, 274, 2196-2209.	2.2	9

#	ARTICLE	IF	CITATIONS
55	Towards improved understanding of intersubunit interactions in modular polyketide biosynthesis: Docking in the enacyloxin IIa polyketide synthase. <i>Journal of Structural Biology</i> , 2020, 212, 107581.	1.3	9
56	Manipulating polyketide stereochemistry by exchange of polyketide synthase modules. <i>Chemical Communications</i> , 2020, 56, 12749-12752.	2.2	9
57	Engineering the stambomycin modular polyketide synthase yields 37-membered mini-stambomycins. <i>Nature Communications</i> , 2022, 13, 515.	5.8	8
58	Taking a Closer Look at Fatty Acid Biosynthesis. <i>ChemBioChem</i> , 2008, 9, 2929-2931.	1.3	7
59	Peering into the Black Box of Fungal Polyketide Biosynthesis. <i>ChemBioChem</i> , 2010, 11, 485-488.	1.3	7
60	Unpackaging the Roles of Streptomyces Natural Products. <i>Cell Chemical Biology</i> , 2017, 24, 1194-1195.	2.5	7
61	Plumbing New Depths in Drug Discovery. <i>Chemistry and Biology</i> , 2004, 11, 743-745.	6.2	6
62	A New Origin for Chartreusin. <i>Chemistry and Biology</i> , 2005, 12, 512-514.	6.2	6
63	Anatomy of a Fungal Polyketide Synthase. <i>Science</i> , 2008, 320, 186-187.	6.0	5
64	A twist in the tail. <i>Nature Chemical Biology</i> , 2011, 7, 409-411.	3.9	5
65	Crystal Structure of a Molecular Assembly Line. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 8344-8346.	7.2	4
66	Bacterial Type I Polyketide Synthases. , 2020, , 4-46.		2
67	Probing Interactions in Fungal PKS. <i>Chemistry and Biology</i> , 2013, 20, 1089-1091.	6.2	0
68	Editorial overview: Macromolecular assemblies: Assembly, dynamics and control of activity. <i>Current Opinion in Structural Biology</i> , 2018, 49, vi-vii.	2.6	0
69	Engineering Modular Polyketide Biosynthesis in Streptomyces Using CRISPR/Cas: A Practical Guide. <i>Methods in Molecular Biology</i> , 2022, 2489, 173-200.	0.4	0