James C Sacchettini

List of Publications by Year in Descending Order

107 papers	11,470 citations	40 h-index	107 g-index
117 ext. papers	12,925 ext. citations	11.7 avg, IF	5.69 L-index

#	Paper	IF	Citations
107	Interplay between an ATP-binding cassette F protein and the ribosome from Mycobacterium tuberculosis.. *Nature Communications*, **2022**, 13, 432	17.4	2
106	A portable brightfield and fluorescence microscope toward automated malarial parasitemia quantification in thin blood smears.. *PLoS ONE*, **2022**, 17, e0266441	3.7	0
105	CinA mediates multidrug tolerance in Mycobacterium tuberculosis.. *Nature Communications*, **2022**, 13, 2203	17.4	2
104	Structural anatomy of Protein Kinase C C1 domain interactions with diacylglycerol and other agonists.. *Nature Communications*, **2022**, 13, 2695	17.4	3
103	Mechanism-Based Inactivation of Isocitrate Lyase 1 by (2,3)-2-Hydroxy-3-(nitromethyl)succinic acid. *Journal of the American Chemical Society*, **2021**, 143, 17666-17676	16.4	0
102	Covalent Inactivation of Isocitrate Lyase by -2,3-Epoxy-Succinic Acid. *ACS Chemical Biology*, **2021**, 16, 463-470	4.9	3
101	Development of single-cell-level microfluidic technology for long-term growth visualization of living cultures of. *Microsystems and Nanoengineering*, **2021**, 7, 37	7.7	0
100	Metabolic bifunctionality of Rv0812 couples folate and peptidoglycan biosynthesis in Mycobacterium tuberculosis. *Journal of Experimental Medicine*, **2021**, 218,	16.6	1
99	The Tuberculosis Drug Accelerator at year 10: what have we learned?. *Nature Medicine*, **2021**, 27, 1333-1337	36.5	7
98	Characterization of Phosphopantetheinyl Hydrolase from Mycobacterium tuberculosis. *Microbiology Spectrum*, **2021**, 9, e0092821	8.9	
97	A low-cost, novel endoscopic repeated-access port for small animal research. *MethodsX*, **2020**, 7, 101049	1.9	
96	Elesclomol alleviates Menkes pathology and mortality by escorting Cu to cuproenzymes in mice. *Science*, **2020**, 368, 620-625	33.3	20
95	Activity-Based Protein Profiling Reveals That Cephalosporins Selectively Active on Non-replicating Bind Multiple Protein Families and Spare Peptidoglycan Transpeptidases. *Frontiers in Microbiology*, **2020**, 11, 1248	5.7	5
94	The Structural Basis of T4 Phage Lysis Control: DNA as the Signal for Lysis Inhibition. *Journal of Molecular Biology*, **2020**, 432, 4623-4636	6.5	6
93	Improvement of the novel inhibitor for Mycobacterium enoyl-acyl carrier protein reductase (InhA): a structure-activity relationship study of KES4 assisted by in silico structure-based drug screening. *Journal of Antibiotics*, **2020**, 73, 372-381	3.7	0
92	The molecular basis of pyrazinamide activity on Mycobacterium tuberculosis PanD. *Nature Communications*, **2020**, 11, 339	17.4	20
91	Aspartate aminotransferase Rv3722c governs aspartate-dependent nitrogen metabolism in Mycobacterium tuberculosis. *Nature Communications*, **2020**, 11, 1960	17.4	16

90	A Sec14-like phosphatidylinositol transfer protein paralog defines a novel class of heme-binding proteins. *ELife*, **2020**, 9,	8.9	5
89	Structural insights into phosphopantetheinyl hydrolase PptH from Mycobacterium tuberculosis. *Protein Science*, **2020**, 29, 744-757	6.3	4
88	Mutations in () as a Novel Determinant of Resistance to Pretomanid and Delamanid in Mycobacterium tuberculosis. *Antimicrobial Agents and Chemotherapy*, **2020**, 65,	5.9	15
87	Bedaquiline reprograms central metabolism to reveal glycolytic vulnerability in Mycobacterium tuberculosis. *Nature Communications*, **2020**, 11, 6092	17.4	11
86	Structural and functional insight into the Mycobacterium tuberculosis protein PrpR reveals a novel type of transcription factor. *Nucleic Acids Research*, **2019**, 47, 9934-9949	20.1	7
85	Opposing reactions in coenzyme A metabolism sensitize to enzyme inhibition. *Science*, **2019**, 363,	33.3	37
84	A DNA-Binding Protein Tunes Septum Placement during Sporulation. *Journal of Bacteriology*, **2019**, 201,	3.5	3
83	Structure-Guided Drug Design of 6-Substituted Adenosine Analogues as Potent Inhibitors of Mycobacterium tuberculosis Adenosine Kinase. *Journal of Medicinal Chemistry*, **2019**, 62, 4483-4499	8.3	7
82	Genome-wide Phenotypic Profiling Identifies and Categorizes Genes Required for Mycobacterial Low Iron Fitness. *Scientific Reports*, **2019**, 9, 11394	4.9	18
81	SatS is a chaperone for the SecA2 protein export pathway. *ELife*, **2019**, 8,	8.9	8
80	Minocycline and Silver Dual-Loaded Polyphosphoester-Based Nanoparticles for Treatment of Resistant Pseudomonas aeruginosa. *Molecular Pharmaceutics*, **2019**, 16, 1606-1619	5.6	13
79	R pyocin tail fiber structure reveals a receptor-binding domain with a lectin fold. *PLoS ONE*, **2019**, 14, e0211432	3.7	9
78	Advancing Translational Science for Pulmonary Nontuberculous Mycobacterial Infections. A Road Map for Research. *American Journal of Respiratory and Critical Care Medicine*, **2019**, 199, 947-951	10.2	31
77	Targeting protein biotinylation enhances tuberculosis chemotherapy. *Science Translational Medicine*, **2018**, 10,	17.5	17
76	Structure-guided design of a potent peptide inhibitor targeting the interaction between CRK and ABL kinase. *MedChemComm*, **2018**, 9, 519-524	5	1
75	Discovery of Antimicrobial Lipodepsipeptides Produced by a Serratia sp. within Mosquito Microbiomes. *ChemBioChem*, **2018**, 19, 1590-1594	3.8	14
74	An Antibacterial Lactone Kills Mycobacterium tuberculosis by Disrupting Mycolic Acid Biosynthesis. *Angewandte Chemie - International Edition*, **2018**, 57, 348-353	16.4	34
73	Ein antibakterielles Lacton bekämpft Mycobacterium tuberculosis durch Infiltration der Mykolsäurebiosynthese. *Angewandte Chemie*, **2018**, 130, 354-359	3.6	3

72	Impact of immunopathology on the antituberculous activity of pyrazinamide. *Journal of Experimental Medicine*, **2018**, 215, 1975-1986	16.6	19
71	Anion-Interactions in Computer-Aided Drug Design: Modeling the Inhibition of Malate Synthase by Phenyl-Diketo Acids. *Journal of Chemical Information and Modeling*, **2018**, 58, 2085-2091	6.1	17
70	Construction of an overexpression library for. *Biology Methods and Protocols*, **2018**, 3, bpy009	2.4	6
69	TnSeq of Mycobacterium tuberculosis clinical isolates reveals strain-specific antibiotic liabilities. *PLoS Pathogens*, **2018**, 14, e1006939	7.6	47
68	A Lysine Acetyltransferase Contributes to the Metabolic Adaptation to Hypoxia in Mycobacterium tuberculosis. *Cell Chemical Biology*, **2018**, 25, 1495-1505.e3	8.2	17
67	A strategy for dual inhibition of the proteasome and fatty acid synthase with belactosin C-orlistat hybrids. *Bioorganic and Medicinal Chemistry*, **2017**, 25, 2901-2916	3.4	10
66	Glyoxylate detoxification is an essential function of malate synthase required for carbon assimilation in. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E2225-E2232	11.5	53
65	Structural insights into species-specific features of the ribosome from the human pathogen Mycobacterium tuberculosis. *Nucleic Acids Research*, **2017**, 45, 10884-10894	20.1	41
64	Identification of a novel class of small compounds with anti-tuberculosis activity by in silico structure-based drug screening. *Journal of Antibiotics*, **2017**, 70, 1057-1064	3.7	3
63	Ribosomal mutations promote the evolution of antibiotic resistance in a multidrug environment. *ELife*, **2017**, 6,	8.9	34
62	A comprehensive characterization of PncA polymorphisms that confer resistance to pyrazinamide. *Nature Communications*, **2017**, 8, 588	17.4	64
61	Tetraterpene Synthase Substrate and Product Specificity in the Green Microalga Botryococcus braunii Race L. *ACS Chemical Biology*, **2017**, 12, 2408-2416	4.9	1
60	Mechanism-based inactivator of isocitrate lyases 1 and 2 from. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 7617-7622	11.5	19
59	Development of a Novel Lead that Targets M. tuberculosis Polyketide Synthase 13. *Cell*, **2017**, 170, 249-259.e25	36.2	88
58	Discovery of Novel Oral Protein Synthesis Inhibitors of Mycobacterium tuberculosis That Target Leucyl-tRNA Synthetase. *Antimicrobial Agents and Chemotherapy*, **2016**, 60, 6271-80	5.9	61
57	Binding Mechanism of the N-Terminal SH3 Domain of CrkII and Proline-Rich Motifs in cAbl. *Biophysical Journal*, **2016**, 110, 2630-2641	2.9	14
56	Structural Insights into Mycobacterium tuberculosis Rv2671 Protein as a Dihydrofolate Reductase Functional Analogue Contributing to para-Aminosalicylic Acid Resistance. *Biochemistry*, **2016**, 55, 1107-19	3.2	13
55	Selective Inactivity of Pyrazinamide against Tuberculosis in C3HeB/FeJ Mice Is Best Explained by Neutral pH of Caseum. *Antimicrobial Agents and Chemotherapy*, **2016**, 60, 735-43	5.9	47

54	Mycobacterial Metabolic Syndrome: LprG and Rv1410 Regulate Triacylglyceride Levels, Growth Rate and Virulence in Mycobacterium tuberculosis. *PLoS Pathogens*, **2016**, 12, e1005351	7.6	65
53	High Throughput Screen for Escherichia coli Twin Arginine Translocation (Tat) Inhibitors. *PLoS ONE*, **2016**, 11, e0149659	3.7	10
52	N-Benzyl-4-((heteroaryl)methyl)benzamides: A New Class of Direct NADH-Dependent 2-trans Enoyl-Acyl Carrier Protein Reductase (InhA) Inhibitors with Antitubercular Activity. *ChemMedChem*, **2016**, 11, 687-701	3.7	21
51	Antitubercular drugs for an old target: GSK693 as a promising InhA direct inhibitor. *EBioMedicine*, **2016**, 8, 291-301	8.8	41
50	Discovery of InhA inhibitors with anti-mycobacterial activity through a matched molecular pair approach. *European Journal of Medicinal Chemistry*, **2015**, 94, 378-85	6.8	14
49	Peptidoglycan synthesis in Mycobacterium tuberculosis is organized into networks with varying drug susceptibility. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 13087-92	11.5	64
48	Structure of Ribosomal Silencing Factor Bound to Mycobacterium tuberculosis Ribosome. *Structure*, **2015**, 23, 1858-1865	5.2	37
47	Structural Similarities and Differences between Two Functionally Distinct SecA Proteins, Mycobacterium tuberculosis SecA1 and SecA2. *Journal of Bacteriology*, **2015**, 198, 720-30	3.5	14
46	Comparison of transposon and deletion mutants in Mycobacterium tuberculosis: The case of rv1248c, encoding 2-hydroxy-3-oxoadipate synthase. *Tuberculosis*, **2015**, 95, 689-694	2.6	2
45	High-Throughput Differentiation and Screening of a Library of Mutant Stem Cell Clones Defines New Host-Based Genes Involved in Rabies Virus Infection. *Stem Cells*, **2015**, 33, 2509-22	5.8	1
44	Crystal structure of the human 20S proteasome in complex with carfilzomib. *Structure*, **2015**, 23, 418-24	5.2	101
43	A novel antimycobacterial compound acts as an intracellular iron chelator. *Antimicrobial Agents and Chemotherapy*, **2015**, 59, 2256-64	5.9	27
42	Functional genomics screening utilizing mutant mouse embryonic stem cells identifies novel radiation-response genes. *PLoS ONE*, **2015**, 10, e0120534	3.7	5
41	Sterilization of granulomas is common in active and latent tuberculosis despite within-host variability in bacterial killing. *Nature Medicine*, **2014**, 20, 75-9	50.5	327
40	Synthesis and evaluation of the 2,4-diaminoquinazoline series as anti-tubercular agents. *Bioorganic and Medicinal Chemistry*, **2014**, 22, 6965-79	3.4	21
39	Structure, activity, and inhibition of the Carboxyltransferase β-subunit of acetyl coenzyme A carboxylase (AccD6) from Mycobacterium tuberculosis. *Antimicrobial Agents and Chemotherapy*, **2014**, 58, 6122-32	5.9	16
38	Folate pathway disruption leads to critical disruption of methionine derivatives in Mycobacterium tuberculosis. *Chemistry and Biology*, **2014**, 21, 819-30		41
37	Subfamily-specific adaptations in the structures of two penicillin-binding proteins from Mycobacterium tuberculosis. *PLoS ONE*, **2014**, 9, e116249	3.7	4

36	Tryptophan biosynthesis protects mycobacteria from CD4 T-cell-mediated killing. *Cell*, **2013**, 155, 1296-308	36.2	222
35	Identification of compounds with potential antibacterial activity against Mycobacterium through structure-based drug screening. *Journal of Chemical Information and Modeling*, **2013**, 53, 1200-12	6.1	16
34	Identification of new drug targets and resistance mechanisms in Mycobacterium tuberculosis. *PLoS ONE*, **2013**, 8, e75245	3.7	165
33	Structure-guided discovery of phenyl-diketo acids as potent inhibitors of M. tuberculosis malate synthase. *Chemistry and Biology*, **2012**, 19, 1556-67		80
32	Global assessment of genomic regions required for growth in Mycobacterium tuberculosis. *PLoS Pathogens*, **2012**, 8, e1002946	7.6	181
31	Deletion of SenX3-RegX3, a key two-component regulatory system of Mycobacterium smegmatis, results in growth defects under phosphate-limiting conditions. *Microbiology (United Kingdom)*, **2012** , 158, 2724-2731	2.9	19
30	Use of whole genome sequencing to estimate the mutation rate of Mycobacterium tuberculosis during latent infection. *Nature Genetics*, **2011**, 43, 482-6	36.3	319
29	The TB Structural Genomics Consortium: a decade of progress. *Tuberculosis*, **2011**, 91, 155-72	2.6	33
28	Mycobacterium tuberculosis acyl carrier protein synthase adopts two different pH-dependent structural conformations. *Acta Crystallographica Section D: Biological Crystallography*, **2011**, 67, 657-69		10
27	Phosphorylation of InhA inhibits mycolic acid biosynthesis and growth of Mycobacterium tuberculosis. *Molecular Microbiology*, **2010**, 78, 1591-605	4.1	55
26	Variation among genome sequences of H37Rv strains of Mycobacterium tuberculosis from multiple laboratories. *Journal of Bacteriology*, **2010**, 192, 3645-53	3.5	173
25	Structural insights into the mechanism of the allosteric transitions of Mycobacterium tuberculosis cAMP receptor protein. *Journal of Biological Chemistry*, **2009**, 284, 36581-36591	5.4	30
24	Drugs versus bugs: in pursuit of the persistent predator Mycobacterium tuberculosis. *Nature Reviews Microbiology*, **2008**, 6, 41-52	22.2	191
23	Structural and functional analyses of the severe acute respiratory syndrome coronavirus endoribonuclease Nsp15. *Journal of Biological Chemistry*, **2008**, 283, 3655-3664	5.4	80
22	The effect of hinge mutations on effector binding and domain rotation in Escherichia coli D-3-phosphoglycerate dehydrogenase. *Journal of Biological Chemistry*, **2007**, 282, 18418-18426	5.4	15
21	High resolution crystal structures of Mycobacterium tuberculosis adenosine kinase: insights into the mechanism and specificity of this novel prokaryotic enzyme. *Journal of Biological Chemistry*, **2007**, 282, 27334-27342	5.4	31
20	Mechanism of thioamide drug action against tuberculosis and leprosy. *Journal of Experimental Medicine*, **2007**, 204, 73-8	16.6	223
19	Dual role of isocitrate lyase 1 in the glyoxylate and methylcitrate cycles in Mycobacterium tuberculosis. *Molecular Microbiology*, **2006**, 61, 940-7	4.1	142

18	Transfer of a point mutation in Mycobacterium tuberculosis inhA resolves the target of isoniazid. *Nature Medicine*, **2006**, 12, 1027-9	50.5	226
17	TB drug discovery: addressing issues of persistence and resistance. *Tuberculosis*, **2004**, 84, 45-55	2.6	98
16	Biochemical and structural studies of malate synthase from Mycobacterium tuberculosis. *Journal of Biological Chemistry*, **2003**, 278, 1735-43	5.4	109
15	PHENIX: building new software for automated crystallographic structure determination. *Acta Crystallographica Section D: Biological Crystallography*, **2002**, 58, 1948-54		3477
14	Therapeutic strategies for human amyloid diseases. *Nature Reviews Drug Discovery*, **2002**, 1, 267-75	64.1	205
13	Multivalent protein-carbohydrate interactions. A new paradigm for supermolecular assembly and signal transduction. *Biochemistry*, **2001**, 40, 3009-15	3.2	263
12	Solution structure of ileal lipid binding protein in complex with glycocholate. *FEBS Journal*, **2000**, 267, 2929-38		40
11	Gene-target recognition among members of the myc superfamily and implications for oncogenesis. *Nature Genetics*, **2000**, 24, 113-9	36.3	122
10	Structure of isocitrate lyase, a persistence factor of Mycobacterium tuberculosis. *Nature Structural Biology*, **2000**, 7, 663-8		187
9	Persistence of Mycobacterium tuberculosis in macrophages and mice requires the glyoxylate shunt enzyme isocitrate lyase. *Nature*, **2000**, 406, 735-8	50.4	1091
8	Binding of fatty acids and peroxisome proliferators to orthologous fatty acid binding proteins from human, murine, and bovine liver. *Biochemistry*, **2000**, 39, 1469-74	3.2	67
7	Inactivation of the inhA-encoded fatty acid synthase II (FASII) enoyl-acyl carrier protein reductase induces accumulation of the FASI end products and cell lysis of Mycobacterium smegmatis. *Journal of Bacteriology*, **2000**, 182, 4059-67	3.5	212
6	Structure-Based Design of N-Phenyl Phenoxazine Transthyretin Amyloid Fibril Inhibitors. *Journal of the American Chemical Society*, **2000**, 122, 2178-2192	16.4	74
5	A comparative study of the backbone dynamics of two closely related lipid binding proteins: Bovine heart fatty acid binding protein and porcine ileal lipid binding protein. *Molecular and Cellular Biochemistry*, **1999**, 192, 109-121	4.2	21
4	Crystal structure of a plant catechol oxidase containing a dicopper center. *Nature Structural Biology* , **1998**, 5, 1084-90		671
3	Mechanisms for isoniazid action and resistance. *Novartis Foundation Symposium*, **1998**, 217, 209-20; discussion 220-1		24
2	Modification of the NADH of the isoniazid target (InhA) from Mycobacterium tuberculosis. *Science*, **1998**, 279, 98-102	33.3	563
1	Enzymatic characterization of the target for isoniazid in Mycobacterium tuberculosis. *Biochemistry*, **1995**, 34, 8235-41	3.2	348