

# Mark von Itzstein

## List of Publications by Year in descending order

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106  
papers

5,921  
citations

172457

29  
h-index

76900

74  
g-index

115  
all docs

115  
docs citations

115  
times ranked

5931  
citing authors

#	ARTICLE	IF	CITATIONS
1	Rational design of potent sialidase-based inhibitors of influenza virus replication. <i>Nature</i> , 1993, 363, 418-423.	27.8	1,823
2	The war against influenza: discovery and development of sialidase inhibitors. <i>Nature Reviews Drug Discovery</i> , 2007, 6, 967-974.	46.4	614
3	NAD <sup>+</sup> cleavage activity by animal and plant TIR domains in cell death pathways. <i>Science</i> , 2019, 365, 793-799.	12.6	357
4	Molecular Modeling Studies on Ligand Binding to Sialidase from Influenza Virus and the Mechanism of Catalysis. <i>Journal of Medicinal Chemistry</i> , 1994, 37, 616-624.	6.4	214
5	Glycointeractions in bacterial pathogenesis. <i>Nature Reviews Microbiology</i> , 2018, 16, 440-452.	28.6	181
6	Evidence for a sialosyl cation transition-state complex in the reaction of sialidase from influenza virus. <i>FEBS Journal</i> , 1992, 207, 335-343.	0.2	158
7	Limited Inhibitory Effects of Oseltamivir and Zanamivir on Human Sialidases. <i>Antimicrobial Agents and Chemotherapy</i> , 2008, 52, 3484-3491.	3.2	154
8	Inhibition of sialidases from viral, bacterial and mammalian sources by analogues of 2-deoxy-2,3-didehydro-N-acetylneuraminic acid modified at the C-4 position. <i>Glycoconjugate Journal</i> , 1993, 10, 40-44.	2.7	139
9	A Study of the Active Site of Influenza Virus Sialidase: An Approach to the Rational Design of Novel Anti-influenza Drugs. <i>Journal of Medicinal Chemistry</i> , 1996, 39, 388-391.	6.4	118
10	Novel sialic acid derivatives lock open the 150-loop of an influenza A virus group-1 sialidase. <i>Nature Communications</i> , 2010, 1, 113.	12.8	102
11	Analysis of inhibitor binding in influenza virus neuraminidase. <i>Protein Science</i> , 2001, 10, 689-696.	7.6	97
12	Differential Carbohydrate Recognition by <i>Campylobacter jejuni</i> Strain 11168: Influences of Temperature and Growth Conditions. <i>PLoS ONE</i> , 2009, 4, e4927.	2.5	95
13	Ferrets exclusively synthesize Neu5Ac and express naturally humanized influenza A virus receptors. <i>Nature Communications</i> , 2014, 5, 5750.	12.8	94
14	Unravelling the Role of O-glycans in Influenza A Virus Infection. <i>Scientific Reports</i> , 2018, 8, 16382.	3.3	66
15	A convenient method for the introduction of nitrogen and sulfur at C-4 on a sialic acid analogue. <i>Carbohydrate Research</i> , 1993, 244, 181-185.	2.3	64
16	Complexity in Influenza Virus Targeted Drug Design: Interaction with Human Sialidases. <i>Journal of Medicinal Chemistry</i> , 2010, 53, 2998-3002.	6.4	62
17	Chemical Synergy between Ionophore PBT2 and Zinc Reverses Antibiotic Resistance. <i>MBio</i> , 2018, 9, .	4.1	56
18	Avian Influenza H5N1-Containing Virus-Like Particles (VLPs): Host-Cell Receptor Specificity by STD NMR Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 1910-1912.	13.8	51

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19	Neutralizing the pathological effects of extracellular histones with small polyanions. <i>Nature Communications</i> , 2020, 11, 6408.	12.8	48
20	The approved pediatric drug suramin identified as a clinical candidate for the treatment of EV71 infection—suramin inhibits EV71 infection <i>in vitro</i> and <i>in vivo</i> . <i>Emerging Microbes and Infections</i> , 2014, 3, 1-9.	6.5	47
21	Multidisciplinary Approaches Identify Compounds that Bind to Human ACE2 or SARS-CoV-2 Spike Protein as Candidates to Block SARS-CoV-2 ACE2 Receptor Interactions. <i>MBio</i> , 2021, 12, .	4.1	47
22	Anti-Influenza Drugs: The Development of Sialidase Inhibitors. <i>Handbook of Experimental Pharmacology</i> , 2009, , 111-154.	1.8	46
23	All major cholesterol-dependent cytolysins use glycans as cellular receptors. <i>Science Advances</i> , 2020, 6, eaaz4926.	10.3	46
24	Synthesis of Phosphonic Acid Analogues of Sialic Acids (Neu5Ac and KDN) as Potential Sialidase Inhibitors. <i>Journal of Organic Chemistry</i> , 1997, 62, 3500-3504.	3.2	40
25	Synthesis and biological evaluation of galactofuranosyl alkyl thioglycosides as inhibitors of mycobacteria. <i>Carbohydrate Research</i> , 2007, 342, 1773-1780.	2.3	38
26	Synthesis and evaluation of galactofuranosyl N,N-dialkyl sulfenamides and sulfonamides as antimycobacterial agents. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2007, 17, 2274-2277.	2.2	37
27	Recognition of the GM3 Ganglioside Glycan by Rhesus Rotavirus Particles. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 1055-1058.	13.8	36
28	Repurposing a neurodegenerative disease drug to treat Gram-negative antibiotic-resistant bacterial sepsis. <i>Science Translational Medicine</i> , 2020, 12, .	12.4	36
29	A structural and energetics analysis of the binding of a series of N-acetylneuraminic-acid-based inhibitors to influenza virus sialidase. <i>Journal of Computer-Aided Molecular Design</i> , 1996, 10, 233-246.	2.9	35
30	Antiangiogenic platinum through glycan targeting. <i>Chemical Science</i> , 2017, 8, 241-252.	7.4	35
31	( <i>p</i> -Dimethylaminophenyl) Diphenylphosphine: A More Practical Phosphine in the Mitsunobu Reaction. <i>Synthetic Communications</i> , 1990, 20, 2049-2057.	2.1	32
32	Structure-guided discovery of potent and dual-acting human parainfluenza virus haemagglutinin—neuraminidase inhibitors. <i>Nature Communications</i> , 2014, 5, 5268.	12.8	32
33	Functional and structural characterization of a heparanase. <i>Nature Chemical Biology</i> , 2015, 11, 955-957.	8.0	31
34	A Secondary Sialic Acid Binding Site on Influenza Virus Neuraminidase: Fact or Fiction?. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 2221-2224.	13.8	30
35	Approach for Profiling of Glycosphingolipid Glycosylation by Multiplexed Capillary Gel Electrophoresis Coupled to Laser-Induced Fluorescence Detection To Identify Cell-Surface Markers of Human Pluripotent Stem Cells and Derived Cardiomyocytes. <i>Analytical Chemistry</i> , 2019, 91, 6413-6418.	6.5	28
36	Disease-associated carbohydrate-recognising proteins and structure-based inhibitor design. <i>Current Opinion in Structural Biology</i> , 2008, 18, 558-566.	5.7	27

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37	The Catalytic Mechanism of Human Parainfluenza Virus Type-3 Haemagglutinin-Neuraminidase Revealed. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 2936-2940.	13.8	27
38	A Conformational Study of the Human and Rat Encephalitogenic Myelin Oligodendrocyte Glycoprotein Peptides 35-55. <i>FEBS Journal</i> , 1997, 246, 59-70.	0.2	24
39	Multiple Bactericidal Mechanisms of the Zinc Ionophore PBT2. <i>MSphere</i> , 2020, 5, .	2.9	24
40	Substitution-Inert Polynuclear Platinum Complexes as Metalloshielding Agents for Heparan Sulfate. <i>Chemistry - A European Journal</i> , 2018, 24, 6606-6616.	3.3	23
41	Unsaturated N-acetyl- D-glucosaminuronic acid glycosides as inhibitors of influenza virus sialidase. <i>Glycoconjugate Journal</i> , 2006, 23, 127-133.	2.7	22
42	Synthesis and evaluation of 4-O-alkylated 2-deoxy-2,3-didehydro-N-acetylneuraminic acid derivatives as inhibitors of human parainfluenza virus type-3 sialidase activity. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2007, 17, 1655-1658.	2.2	22
43	The synthesis and biological evaluation of lactose-based sialylmimetics as inhibitors of rotaviral infection. <i>Bioorganic and Medicinal Chemistry</i> , 2006, 14, 739-757.	3.0	21
44	How Size Matters: Diversity for Fragment Library Design. <i>Molecules</i> , 2019, 24, 2838.	3.8	21
45	<i>Neisseria gonorrhoeae</i> Becomes Susceptible to Polymyxin B and Colistin in the Presence of PBT2. <i>ACS Infectious Diseases</i> , 2020, 6, 50-55.	3.8	21
46	Investigation of the binding and cleavage characteristics of N1 neuraminidases from avian, seasonal, and pandemic influenza viruses using saturation transfer difference nuclear magnetic resonance. <i>Influenza and Other Respiratory Viruses</i> , 2014, 8, 235-242.	3.4	20
47	Carbohydrate-binding protein identification by coupling structural similarity searching with binding affinity prediction. <i>Journal of Computational Chemistry</i> , 2014, 35, 2177-2183.	3.3	20
48	Exploring Human Parainfluenza Virus Type-1 Hemagglutinin-Neuraminidase as a Target for Inhibitor Discovery. <i>Journal of Medicinal Chemistry</i> , 2014, 57, 7613-7623.	6.4	20
49	Cyclization-blocked proguanil as a strategy to improve the antimalarial activity of atovaquone. <i>Communications Biology</i> , 2019, 2, 166.	4.4	20
50	New antiviral approaches for human parainfluenza: Inhibiting the haemagglutinin-neuraminidase. <i>Antiviral Research</i> , 2019, 167, 89-97.	4.1	20
51	Saturation transfer difference (STD) 1H-NMR experiments and in silico docking experiments to probe the binding of N-acetylneuraminic acid and derivatives to <i>Vibrio cholerae</i> sialidase. <i>Proteins: Structure, Function and Bioinformatics</i> , 2004, 56, 346-353.	2.6	19
52	Synthesis of simple heparanase substrates. <i>Organic and Biomolecular Chemistry</i> , 2011, 9, 4614.	2.8	19
53	Dysregulation of <i>Streptococcus pneumoniae</i> zinc homeostasis breaks ampicillin resistance in a pneumonia infection model. <i>Cell Reports</i> , 2022, 38, 110202.	6.4	18
54	Efficient Blocking of Enterovirus 71 Infection by Heparan Sulfate Analogues Acting as Decoy Receptors. <i>ACS Infectious Diseases</i> , 2019, 5, 1708-1717.	3.8	17

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55	Probing a CMP-Kdn synthetase by <sup>1</sup> H, <sup>31</sup> P, and STD NMR spectroscopy. <i>Biochemical and Biophysical Research Communications</i> , 2005, 327, 565-570.	2.1	16
56	Exposing the Flexibility of Human Parainfluenza Virus Hemagglutinin-neuraminidase. <i>Journal of the American Chemical Society</i> , 2012, 134, 18447-18452.	13.7	15
57	Enhancing Vaccine Efficacy by Engineering a Complex Synthetic Peptide To Become a Super Immunogen. <i>Journal of Immunology</i> , 2017, 199, 2794-2802.	0.8	15
58	An efficient approach to N-acetyl-d-glucosaminuronic acid-based sialylmimetics as potential sialidase inhibitors. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2004, 14, 5555-5558.	2.2	14
59	A dual drug regimen synergistically blocks human parainfluenza virus infection. <i>Scientific Reports</i> , 2016, 6, 24138.	3.3	14
60	Glycans as Ligands in Bioinorganic Chemistry. Probing the Interaction of a Trinuclear Platinum Anticancer Complex with Defined Monosaccharide Fragments of Heparan Sulfate. <i>Inorganic Chemistry</i> , 2019, 58, 7146-7155.	4.0	14
61	Platinum complexes act as shielding agents against virus infection. <i>Chemical Communications</i> , 2021, 57, 4666-4669.	4.1	14
62	Synthesis and evaluation of N-acetylneuraminic acid-based affinity matrices for the purification of sialic acid-recognizing proteins. <i>Glycoconjugate Journal</i> , 1998, 15, 663-669.	2.7	13
63	Exploring Bacterial Heparinase II Activities with Defined Substrates. <i>ChemBioChem</i> , 2015, 16, 1205-1211.	2.6	13
64	A <sup>1</sup> H NMR investigation of the hydrolysis of a synthetic substrate by KDN-sialidase from <i>Crassostrea virginica</i> . <i>Glycoconjugate Journal</i> , 1996, 13, 927-931.	2.7	12
65	How pure is your thiosialoside? A reinvestigation into the HPLC purification of thioglycosides of N-acetylneuraminic acid. <i>Glycoconjugate Journal</i> , 1999, 16, 13-17.	2.7	12
66	A Sulfonozanamivir Analogue Has Potent Anti- $\epsilon$ Influenza Virus Activity. <i>ChemMedChem</i> , 2018, 13, 785-789.	3.2	12
67	Conformational Modulation of Iduronic Acid-Containing Sulfated Glycosaminoglycans by a Polynuclear Platinum Compound and Implications for Development of Antimetastatic Platinum Drugs. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 3283-3289.	13.8	12
68	Decarboxylation of a sialic acid derivative. <i>Carbohydrate Research</i> , 1996, 282, 181-187.	2.3	11
69	Avian influenza virus, a very sticky situation. <i>Current Opinion in Chemical Biology</i> , 2008, 12, 102-108.	6.1	11
70	Novel 3,4-disubstituted-Neu5Ac2en derivatives as probes to investigate flexibility of the influenza virus sialidase 150-loop. <i>Bioorganic and Medicinal Chemistry</i> , 2013, 21, 4820-4830.	3.0	11
71	The impact of the butterfly effect on human parainfluenza virus haemagglutinin-neuraminidase inhibitor design. <i>Scientific Reports</i> , 2017, 7, 4507.	3.3	11
72	Rescuing Tetracycline Class Antibiotics for the Treatment of Multidrug-Resistant <i>Acinetobacter baumannii</i> Pulmonary Infection. <i>MBio</i> , 2022, 13, e0351721.	4.1	11

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73	An investigation of the activity of recombinant rat skeletal muscle cytosolic sialidase. <i>FEBS Letters</i> , 2005, 579, 1034-1038.	2.8	10
74	Endosialidase NF Appears To Bind PolySia DP5 in a Helical Conformation. <i>ChemBioChem</i> , 2006, 7, 1875-1877.	2.6	10
75	Structural Insights into Human Parainfluenza Virus 3 Hemagglutininâ€™Neuraminidase Using Unsaturated 3- <i>N</i> -Substituted Sialic Acids as Probes. <i>ACS Chemical Biology</i> , 2018, 13, 1544-1550.	3.4	10
76	Rapid and clean microwave-assisted synthesis of N-acetylneuraminic acid methyl ester and its 1-methyl glycoside. <i>Tetrahedron Letters</i> , 2012, 53, 6254-6256.	1.4	9
77	A sialosyl sulfonate as a potent inhibitor of influenza virus replication. <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 5249-5253.	2.8	9
78	Overcoming Microenvironment-Mediated Chemoprotection through Stromal Galectin-3 Inhibition in Acute Lymphoblastic Leukemia. <i>International Journal of Molecular Sciences</i> , 2021, 22, 12167.	4.1	9
79	Influenza C virus and bovine coronavirus esterase reveal a similar catalytic mechanism: new insights for drug discovery. <i>Glycoconjugate Journal</i> , 2008, 25, 393-399.	2.7	8
80	Exploring inhibitor structural features required to engage the 216-loop of human parainfluenza virus type-3 hemagglutinin-neuraminidase. <i>MedChemComm</i> , 2017, 8, 130-134.	3.4	8
81	A Portable Device for LAMP Based Detection of SARS-CoV-2. <i>Micromachines</i> , 2021, 12, 1151.	2.9	8
82	Pneumococcal Phasevarions Control Multiple Virulence Traits, Including Vaccine Candidate Expression. <i>Microbiology Spectrum</i> , 2022, 10, e0091622.	3.0	8
83	BROMOHYDROXYLATION OF GLYCALSâ€™AN INVESTIGATION INTO THE REACTION OF SOME 4-N-ACYLATED DERIVATIVES OF METHYL 5-ACETAMIDO-7,8,9-TRI-O-ACETYL-2,6-ANHYDRO-3,4,5-TRIDEOXY-D-GLYCERO-D-GALACTO-NON-2-ENONATE AND ITS 4-EPIMER. <i>Journal of Carbohydrate Chemistry</i> , 2001, 20, 359-374.	1.1	7
84	An approach towards the synthesis of sialyl nucleoside mimetics. <i>Tetrahedron: Asymmetry</i> , 2005, 16, 1425-1434.	1.8	7
85	An efficient approach to 2,5-anhydro-glucitol-based 1-homo-N-nucleoside mimetics. <i>Tetrahedron Letters</i> , 2011, 52, 2741-2743.	1.4	7
86	Targeting Human Parainfluenza Virus Type-1 Haemagglutinin-Neuraminidase with Mechanism-Based Inhibitors. <i>Viruses</i> , 2019, 11, 417.	3.3	7
87	<i>Neisseria meningitidis</i> Serogroup B Polysialyltransferase: Insights into Substrate Binding. <i>ChemBioChem</i> , 2010, 11, 170-174.	2.6	6
88	A versatile synthesis of $\alpha$ -cetafuramycin A, a potent anticancer and parasite attenuating agent. <i>Organic and Biomolecular Chemistry</i> , 2014, 12, 4260-4264.	2.8	6
89	Anti-infectives Overview: The development of potential anti-influenza drugs. <i>Current Opinion in Therapeutic Patents</i> , 1993, 3, 1755-1762.	0.0	6
90	Microwave-assisted synthesis of N-glycolylneuraminic acid derivatives. <i>Tetrahedron Letters</i> , 2013, 54, 5558-5561.	1.4	5

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91	Defining a Substrate-Binding Model of a Polysialyltransferase. <i>ChemBioChem</i> , 2013, 14, 1949-1953.	2.6	5
92	Conformational Modulation of Iduronic Acid-Containing Sulfated Glycosaminoglycans by a Polynuclear Platinum Compound and Implications for Development of Antimetastatic Platinum Drugs. <i>Angewandte Chemie</i> , 2021, 133, 3320-3326.	2.0	5
93	Combinatorial liposomal peptide vaccine induces IgA and confers protection against influenza virus and bacterial superinfection. <i>Clinical and Translational Immunology</i> , 2021, 10, e1337.	3.8	5
94	A 1H STD NMR spectroscopic investigation of sialyl nucleoside mimetics as probes of CMP-Kdn synthetase. <i>Glycoconjugate Journal</i> , 2006, 23, 371-375.	2.7	4
95	A drug candidate for Alzheimer's and Huntington's disease, PBT2, can be repurposed to render <i>Neisseria gonorrhoeae</i> susceptible to natural cationic antimicrobial peptides. <i>Journal of Antimicrobial Chemotherapy</i> , 2021, 76, 2850-2853.	3.0	4
96	Synthesis of C-9 oxidised N-acetylneuraminic acid derivatives as biological probes. <i>Tetrahedron Letters</i> , 2011, 52, 98-100.	1.4	3
97	Neurodegenerative Disease Treatment Drug PBT2 Breaks Intrinsic Polymyxin Resistance in Gram-Positive Bacteria. <i>Antibiotics</i> , 2022, 11, 449.	3.7	3
98	Characterization of the Phase-Variable Autotransporter Lav Reveals a Role in Host Cell Adherence and Biofilm Formation in Nontypeable <i>Haemophilus influenzae</i> . <i>Infection and Immunity</i> , 2022, 90, e0056521.	2.2	2
99	Transcriptomic Data Sets To Determine Gene Expression Changes Mediated by the Presence of PBT2 in Growth Medium of Multidrug-Resistant <i>Neisseria gonorrhoeae</i> WHO Z. <i>Microbiology Resource Announcements</i> , 2020, 9, .	0.6	1
100	Titelbild: Rhesus-Rotaviren erkennen Glykane des GM3-Gangliosids ( <i>Angew. Chem.</i> 5/2011). <i>Angewandte Chemie</i> , 2011, 123, 1232-1232.	2.0	0
101	Back Cover: Recognition of the GM3 Ganglioside Glycan by Rhesus Rotavirus Particles ( <i>Angew. Chem.</i> ) <a href="#">Tj ETQq1 1 0,784314 ggBT / Over</a>	13.8	0
102	Titelbild: The Catalytic Mechanism of Human Parainfluenza Virus Type 3 Haemagglutinin-Neuraminidase Revealed ( <i>Angew. Chem.</i> 10/2015). <i>Angewandte Chemie</i> , 2015, 127, 2899-2899.	2.0	0
103	The Catalytic Mechanism of Human Parainfluenza Virus Type 3 Haemagglutinin-Neuraminidase Revealed. <i>Angewandte Chemie</i> , 2015, 127, 2979-2983.	2.0	0
104	A Novel Series of Sialic Acid-Based Influenza Virus Inhibitors that Target Influenza Virus Neuraminidase. <i>Proceedings (mdpi)</i> , 2019, 22, .	0.2	0
105	How Size Matters: Designing Diverse Fragment Libraries for Novel Drug Discovery. <i>Proceedings (mdpi)</i> , 2019, 22, .	0.2	0
106	Discovery of Cofactor Competitive Inhibitors against the Human Methyltransferase Fibrillarlin. <i>Pharmaceuticals</i> , 2022, 15, 26.	3.8	0