

Rita Gerardy-Schahn

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

91
papers

4,661
citations

38
h-index

67
g-index

96
ext. papers

5,107
ext. citations

7.7
avg, IF

5.23
L-index

#	Paper	IF	Citations
91	Mix-and-Match System for the Enzymatic Synthesis of Enantiopure Glycerol-3-Phosphate-Containing Capsule Polymer Backbones from , , and. <i>MBio</i> , 2021 , 12, e0089721	7.8	2
90	Accelerated production of α ,8- and α ,9-linked polysialic acid in recombinant using high cell density cultivation. <i>Biotechnology Reports (Amsterdam, Netherlands)</i> , 2020 , 28, e00562	5.3	
89	An enzyme-based protocol for cell-free synthesis of nature-identical capsular oligosaccharides from serotype 1. <i>Journal of Biological Chemistry</i> , 2020 , 295, 5771-5784	5.4	2
88	Differential expression patterns of glycosphingolipids and C-type lectin receptors on immune cells in absence of functional regulatory T cells. <i>Immunity, Inflammation and Disease</i> , 2020 , 8, 512-522	2.4	1
87	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	7.8	13
86	Molecular retargeting of antibodies converts immune defense against oncolytic viruses into cancer immunotherapy. <i>Nature Communications</i> , 2019 , 10, 3236	17.4	29
85	Sialic acid is a critical fetal defense against maternal complement attack. <i>Journal of Clinical Investigation</i> , 2019 , 129, 422-436	15.9	22
84	Combined Chemical Synthesis and Tailored Enzymatic Elongation Provide Fully Synthetic and Conjugation-Ready Neisseria meningitidis Serogroup X Vaccine Antigens. <i>ACS Chemical Biology</i> , 2018 , 13, 984-994	4.9	20
83	A single-step transconjugation system for gene deletion in <i>Aggregatibacter actinomycetemcomitans</i> . <i>Journal of Microbiological Methods</i> , 2018 , 148, 74-77	2.8	
82	Decoding Allosteric Networks in Biocatalysts: Rational Approach to Therapies and Biotechnologies. <i>ACS Catalysis</i> , 2018 , 8, 2683-2692	13.1	7
81	Efficient solid-phase synthesis of meningococcal capsular oligosaccharides enables simple and fast chemoenzymatic vaccine production. <i>Journal of Biological Chemistry</i> , 2018 , 293, 953-962	5.4	20
80	A patient-specific induced pluripotent stem cell model for West syndrome caused by ST3GAL3 deficiency. <i>European Journal of Human Genetics</i> , 2018 , 26, 1773-1783	5.3	8
79	Targeting polysialic acid-abundant cancers using oncolytic adenoviruses with fibers fused to active bacteriophage borne endosialidase. <i>Biomaterials</i> , 2018 , 158, 86-94	15.6	10
78	A New Family of Capsule Polymerases Generates Teichoic Acid-Like Capsule Polymers in Gram-Negative Pathogens. <i>MBio</i> , 2018 , 9,	7.8	9
77	Exploring and Exploiting Acceptor Preferences of the Human Polysialyltransferases as a Basis for an Inhibitor Screen. <i>ChemBioChem</i> , 2017 , 18, 1332-1337	3.8	5
76	A sweet development in Notch regulation. <i>Journal of Biological Chemistry</i> , 2017 , 292, 15974-15975	5.4	6
75	Intrabodies against the Polysialyltransferases ST8Siall and ST8SiaIV inhibit Polysialylation of NCAM in rhabdomyosarcoma tumor cells. <i>BMC Biotechnology</i> , 2017 , 17, 42	3.5	6

74	Environmental enrichment rescues memory in mice deficient for the polysialyltransferase ST8SiaIV. <i>Brain Structure and Function</i> , 2016 , 221, 1591-605	4	8
73	Engineering of complex protein sialylation in plants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 9498-503	11.5	61
72	Polysialylation controls dendritic cell trafficking by regulating chemokine recognition. <i>Science</i> , 2016 , 351, 186-90	33.3	97
71	An efficient cell free enzyme-based total synthesis of a meningococcal vaccine candidate. <i>Npj Vaccines</i> , 2016 , 1, 16017	9.5	17
70	SialoGlyco Chemistry and Biology I. <i>Topics in Current Chemistry</i> , 2015 ,		1
69	A quaternary mechanism enables the complex biological functions of octameric human UDP-glucose pyrophosphorylase, a key enzyme in cell metabolism. <i>Scientific Reports</i> , 2015 , 5, 9618	4.9	20
68	PolySia-Specific Retargeting of Oncolytic Viruses Triggers Tumor-Specific Immune Responses and Facilitates Therapy of Disseminated Lung Cancer. <i>Cancer Immunology Research</i> , 2015 , 3, 751-63	12.5	17
67	The capsule polymerase CslB of <i>Neisseria meningitidis</i> serogroup L catalyzes the synthesis of a complex trimeric repeating unit comprising glycosidic and phosphodiester linkages. <i>Journal of Biological Chemistry</i> , 2015 , 290, 24355-66	5.4	14
66	Exclusive Decoration of Simian Immunodeficiency Virus Env with High-Mannose Type N-Glycans Is Not Compatible with Mucosal Transmission in Rhesus Macaques. <i>Journal of Virology</i> , 2015 , 89, 11727-33	6.6	4
65	Think small [Methoden zur in vitro-Evolution von Polymerasen. <i>BioSpektrum</i> , 2015 , 21, 278-280	0.1	
64	Retargeted oncolytic viruses provoke tumor-directed T-cell responses. <i>Oncolmmunology</i> , 2015 , 4, e1052933	9.3	5
63	Structure and biochemical characterization of bacteriophage phi92 endosialidase. <i>Virology</i> , 2015 , 477, 133-143	3.6	16
62	Sialic acids in the brain: gangliosides and polysialic acid in nervous system development, stability, disease, and regeneration. <i>Physiological Reviews</i> , 2014 , 94, 461-518	47.9	412
61	A crucial role for polysialic acid in developmental interneuron migration and the establishment of interneuron densities in the mouse prefrontal cortex. <i>Development (Cambridge)</i> , 2014 , 141, 3022-32	6.6	20
60	Engineering the product profile of a polysialyltransferase. <i>Nature Chemical Biology</i> , 2014 , 10, 437-42	11.7	30
59	Molecular cloning and functional characterization of components of the capsule biosynthesis complex of <i>Neisseria meningitidis</i> serogroup A: toward in vitro vaccine production. <i>Journal of Biological Chemistry</i> , 2014 , 289, 19395-407	5.4	31
58	St8sia2 deficiency plus juvenile cannabis exposure in mice synergistically affect higher cognition in adulthood. <i>Behavioural Brain Research</i> , 2014 , 275, 166-75	3.4	16
57	Polysialic acid/neural cell adhesion molecule modulates the formation of ductular reactions in liver injury. <i>Hepatology</i> , 2014 , 60, 1727-40	11.2	35

56	Functional expression of the capsule polymerase of <i>Neisseria meningitidis</i> serogroup X: a new perspective for vaccine development. <i>Glycobiology</i> , 2014 , 24, 150-8	5.8	32
55	Dissection of hexosyl- and sialyltransferase domains in the bifunctional capsule polymerases from <i>Neisseria meningitidis</i> W and Y defines a new sialyltransferase family. <i>Journal of Biological Chemistry</i> , 2014 , 289, 33945-57	5.4	20
54	Polysialic acid: versatile modification of NCAM, SynCAM 1 and neuropilin-2. <i>Neurochemical Research</i> , 2013 , 38, 1134-43	4.6	74
53	A single amino acid toggles <i>Escherichia coli</i> polysialyltransferases between mono- and bifunctionality. <i>Glycobiology</i> , 2013 , 23, 613-8	5.8	7
52	Biochemical and biophysical characterization of the sialyl-/hexosyltransferase synthesizing the meningococcal serogroup W135 heteropolysaccharide capsule. <i>Journal of Biological Chemistry</i> , 2013 , 288, 11718-30	5.4	23
51	Defining a substrate-binding model of a polysialyltransferase. <i>ChemBioChem</i> , 2013 , 14, 1949-53	3.8	5
50	Downstream processing of high chain length polysialic acid using membrane adsorbers and clay minerals for application in tissue engineering. <i>Engineering in Life Sciences</i> , 2013 , 13, 140-148	3.4	10
49	Pharmacological inhibition of polysialyltransferase ST8Siall modulates tumour cell migration. <i>PLoS ONE</i> , 2013 , 8, e73366	3.7	37
48	A multivalent adsorption apparatus explains the broad host range of phage phi92: a comprehensive genomic and structural analysis. <i>Journal of Virology</i> , 2012 , 86, 10384-98	6.6	66
47	Chemical synthesis and enzymatic testing of CMP-sialic acid derivatives. <i>ChemBioChem</i> , 2012 , 13, 2605-15	5.8	24
46	A universal fluorescent acceptor for high-performance liquid chromatography analysis of pro- and eukaryotic polysialyltransferases. <i>Analytical Biochemistry</i> , 2012 , 427, 107-15	3.1	21
45	Polysialinsüre ßein Zucker reguliert die Hirnentwicklung. <i>BioSpektrum</i> , 2012 , 18, 26-29	0.1	
44	A high-throughput screen for polysialyltransferase activity. <i>Analytical Biochemistry</i> , 2012 , 427, 60-8	3.1	9
43	Comparison of polysialic acid production in <i>Escherichia coli</i> K1 during batch cultivation and fed-batch cultivation applying two different control strategies. <i>Journal of Biotechnology</i> , 2011 , 154, 222-37	3.7	21
42	Crystal structure of an intramolecular chaperone mediating triple-beta-helix folding. <i>Nature Structural and Molecular Biology</i> , 2010 , 17, 210-5	17.6	45
41	Structural basis for the recognition and cleavage of polysialic acid by the bacteriophage K1F tailspike protein EndoNF. <i>Journal of Molecular Biology</i> , 2010 , 397, 341-51	6.5	35
40	Structure analysis of endosialidase NF at 0.98 Å resolution. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2010 , 66, 176-80		9
39	Polysialylation of NCAM. <i>Advances in Experimental Medicine and Biology</i> , 2010 , 663, 95-109	3.6	59

38	Proteolytic release of the intramolecular chaperone domain confers processivity to endosialidase F. <i>Journal of Biological Chemistry</i> , 2009 , 284, 9465-74	5.4	24
37	Imbalance of neural cell adhesion molecule and polysialyltransferase alleles causes defective brain connectivity. <i>Brain</i> , 2009 , 132, 2831-8	11.2	66
36	Large-scale production and homogenous purification of long chain polysialic acids from E. coli K1. <i>Journal of Biotechnology</i> , 2008 , 135, 202-9	3.7	39
35	Enzyme-dependent variations in the polysialylation of the neural cell adhesion molecule (NCAM) in vivo. <i>Journal of Biological Chemistry</i> , 2008 , 283, 17-28	5.4	46
34	Impact of the polysialyltransferases ST8SialI and ST8SialIV on polysialic acid synthesis during postnatal mouse brain development. <i>Journal of Biological Chemistry</i> , 2008 , 283, 1463-1471	5.4	84
33	Polysialic acid, a glycan with highly restricted expression, is found on human and murine leukocytes and modulates immune responses. <i>Journal of Immunology</i> , 2008 , 181, 6850-8	5.3	73
32	A CMP-sialic acid transporter cloned from Arabidopsis thaliana. <i>Carbohydrate Research</i> , 2008 , 343, 2148-52		35
31	A Novel Clinical Syndrome Associating Severe Congenital Neutropenia and Complex Developmental Aberrations Caused by Deficiency of G6PC3. <i>Blood</i> , 2008 , 112, 5-5	2.2	
30	Biochemical characterization of a Neisseria meningitidis polysialyltransferase reveals novel functional motifs in bacterial sialyltransferases. <i>Molecular Microbiology</i> , 2007 , 65, 1258-75	4.1	71
29	Dissecting polysialic acid and NCAM functions in brain development. <i>Journal of Neurochemistry</i> , 2007 , 103 Suppl 1, 56-64	6	109
28	Polysialylated neuropilin-2 is expressed on the surface of human dendritic cells and modulates dendritic cell-T lymphocyte interactions. <i>Journal of Biological Chemistry</i> , 2007 , 282, 30346-56	5.4	141
27	Characterization of a novel intramolecular chaperone domain conserved in endosialidases and other bacteriophage tail spike and fiber proteins. <i>Journal of Biological Chemistry</i> , 2007 , 282, 2821-31	5.4	51
26	The structures of bacteriophages K1E and K1-5 explain processive degradation of polysaccharide capsules and evolution of new host specificities. <i>Journal of Molecular Biology</i> , 2007 , 371, 836-49	6.5	101
25	Endosialidase NF appears to bind polySia DP5 in a helical conformation. <i>ChemBioChem</i> , 2006 , 7, 1875-7	3.8	10
24	Polysialic acid profiles of mice expressing variant allelic combinations of the polysialyltransferases ST8SialI and ST8SialIV. <i>Journal of Biological Chemistry</i> , 2006 , 281, 31605-15	5.4	64
23	Evolution of bacteriophages infecting encapsulated bacteria: lessons from Escherichia coli K1-specific phages. <i>Molecular Microbiology</i> , 2006 , 60, 1123-35	4.1	78
22	Functional expression of the CMP-sialic acid transporter in Escherichia coli and its identification as a simple mobile carrier. <i>Glycobiology</i> , 2006 , 16, 73-81	5.8	21
21	Crystal structure of the polysialic acid-degrading endosialidase of bacteriophage K1F. <i>Nature Structural and Molecular Biology</i> , 2005 , 12, 90-6	17.6	154

20	Genetic ablation of polysialic acid causes severe neurodevelopmental defects rescued by deletion of the neural cell adhesion molecule. <i>Journal of Biological Chemistry</i> , 2005 , 280, 42971-7	5.4	232
19	Endoplasmic reticulum retention of the large splice variant of the UDP-galactose transporter is caused by a dilysine motif. <i>Glycobiology</i> , 2005 , 15, 905-11	5.8	38
18	CMP-sialic acid synthetase of the nucleus. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2004 , 1673, 56-65	4	48
17	Selective inhibition of polysialyltransferase ST8SialI by unnatural sialic acids. <i>Experimental Cell Research</i> , 2004 , 298, 268-74	4.2	39
16	Proteolytic processing and oligomerization of bacteriophage-derived endosialidases. <i>Journal of Biological Chemistry</i> , 2003 , 278, 12634-44	5.4	50
15	Polysialic acid directs tumor cell growth by controlling heterophilic neural cell adhesion molecule interactions. <i>Molecular and Cellular Biology</i> , 2003 , 23, 5908-18	4.8	158
14	The gene defective in leukocyte adhesion deficiency II encodes a putative GDP-fucose transporter. <i>Nature Genetics</i> , 2001 , 28, 69-72	36.3	281
13	Point mutations identified in Lec8 Chinese hamster ovary glycosylation mutants that inactivate both the UDP-galactose and CMP-sialic acid transporters. <i>Journal of Biological Chemistry</i> , 2001 , 276, 26291-30073	5.4	73
12	Nucleotide sugar transporters: biological and functional aspects. <i>Biochimie</i> , 2001 , 83, 775-82	4.6	82
11	Membrane topology of the mammalian CMP-sialic acid transporter. <i>Journal of Biological Chemistry</i> , 1999 , 274, 8779-87	5.4	84
10	Polysialic acid: three-dimensional structure, biosynthesis and function. <i>Current Opinion in Structural Biology</i> , 1998 , 8, 558-64	8.1	154
9	Heterogeneous expression of the polysialyltransferases ST8Sia II and ST8Sia IV during postnatal rat brain development. <i>Journal of Neurochemistry</i> , 1998 , 71, 2339-48	6	86
8	Mutants of the CMP-sialic acid transporter causing the Lec2 phenotype. <i>Journal of Biological Chemistry</i> , 1998 , 273, 20189-95	5.4	82
7	Genomic organization of the murine polysialyltransferase gene ST8SialIV (PST-1). <i>Glycobiology</i> , 1998 , 8, 1165-72	5.8	26
6	Mammalian cytidine 5' monophosphate N-acetylneuraminic acid synthetase: a nuclear protein with evolutionarily conserved structural motifs. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998 , 95, 9140-5	11.5	111
5	Functional expression of the murine Golgi CMP-sialic acid transporter in <i>saccharomyces cerevisiae</i> . <i>Journal of Biological Chemistry</i> , 1997 , 272, 12616-9	5.4	55
4	Molecular cloning of the hamster CMP-sialic acid transporter. <i>FEBS Journal</i> , 1997 , 248, 187-92		28
3	Polysialylation of NCAM by a single enzyme. <i>Current Biology</i> , 1996 , 6, 1188-91	6.3	67

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| 2 | Molecular cloning and functional expression of bacteriophage PK1E-encoded endoneuraminidase Endo NE. <i>Molecular Microbiology</i> , 1995 , 16, 441-50 | 4.1 | 70 |
| 1 | Molecular characterization of eukaryotic polysialyltransferase-1. <i>Nature</i> , 1995 , 373, 715-8 | 50.4 | 269 |