Timothy R Rudd

List of Publications by Year
in descending order

69 papers	2,150 citations	257450 24 h-index	265206 42 g-index
74 all docs	74 docs citations	74 times ranked	3063 citing authors

#	Article	IF	Citations
1	Heparan sulfate and heparin interactions with proteins. Journal of the Royal Society Interface, 2015, 12, 20150589.	3.4	229
2	Heparin Inhibits Cellular Invasion by SARS-CoV-2: Structural Dependence of the Interaction of the Spike S1 Receptor-Binding Domain with Heparin. Thrombosis and Haemostasis, 2020, 120, 1700-1715.	3.4	228
3	N-Glycosylation of Fibroblast Growth Factor Receptor 1 Regulates Ligand and Heparan Sulfate Co-receptor Binding. Journal of Biological Chemistry, 2006, 281, 27178-27189.	3.4	101
4	Diversification of the Structural Determinants of Fibroblast Growth Factor-Heparin Interactions. Journal of Biological Chemistry, 2012, 287, 40061-40073.	3.4	69
5	Influence of substitution pattern and cation binding on conformation and activity in heparin derivatives. Glycobiology, 2007, 17, 983-993.	2.5	66
6	Real-time monitoring of the development and stability of biofilms of Streptococcus mutans using the quartz crystal microbalance with dissipation monitoring. Biosensors and Bioelectronics, 2007, 23, 407-413.	10.1	66
7	New Applications of Heparin and Other Glycosaminoglycans. Molecules, 2017, 22, 749.	3.8	60
8	<i>CDApps</i>: integrated software for experimental planning and data processing at beamline B23, Diamond Light Source. Journal of Synchrotron Radiation, 2015, 22, 465-468.	2.4	58
9	The conformation and structure of GAGs: recent progress and perspectives. Current Opinion in Structural Biology, 2010, 20, 567-574.	5.7	51
10	Glycosaminoglycan origin and structure revealed by multivariate analysis of NMR and CD spectra. Glycobiology, 2009, 19, 52-67.	2.5	50
11	An unusual antithrombin-binding heparin octasaccharide with an additional 3-O-sulfated glucosamine in the active pentasaccharide sequence. Biochemical Journal, 2013, 449, 343-351.	3.7	49
12	Atomic Details of the Interactions of Glycosaminoglycans with Amyloid-Î² Fibrils. Journal of the American Chemical Society, 2016, 138, 8328-8331.	13.7	48
13	Human (Î±2â†’6) and Avian (Î±2â†’3) Sialylated Receptors of Influenza A Virus Show Distinct Conformations and Dynamics in Solution. Biochemistry, 2013, 52, 7217-7230.	2.5	45
14	Differentiation of Generic Enoxaparins Marketed in the United States by Employing NMR and Multivariate Analysis. Analytical Chemistry, 2015, 87, 8275-8283.	6.5	42
15	Inhibition of influenza H5N1 invasion by modified heparin derivatives. MedChemComm, 2015, 6, 640-646.	3.4	40
16	Proteinâ€“GAG interactions: new surface-based techniques, spectroscopies and nanotechnology probes. Biochemical Society Transactions, 2006, 34, 427-430.	3.4	38
17	The Activities of Heparan Sulfate and its Analogue Heparin are Dictated by Biosynthesis, Sequence, and Conformation. Connective Tissue Research, 2008, 49, 140-144.	2.3	38
18	The nature of the conserved basic amino acid sequences found among 437 heparin binding proteins determined by network analysis. Molecular BioSystems, 2017, 13, 852-865.	2.9	36

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19	A highly efficient tree structure for the biosynthesis of heparan sulfate accounts for the commonly observed disaccharides and suggests a mechanism for domain synthesis. Molecular BioSystems, 2012, 8, 1499.	2.9	33
20	Evidence of a putative glycosaminoglycan binding site on the glycosylated SARS-CoV-2 spike protein N-terminal domain. Computational and Structural Biotechnology Journal, 2021, 19, 2806-2818.	4.1	33
21	Site-specific interactions of copper(II) ions with heparin revealed with complementary (SRCD, NMR,) Tj ETQq1 1 0.784314 rgBT /Overlo	2.3	32
22	Comparable stabilisation, structural changes and activities can be induced in FGF by a variety of HS and non-GAG analogues: implications for sequence-activity relationships. Organic and Biomolecular Chemistry, 2010, 8, 5390.	2.8	29
23	Raman and Raman optical activity of glycosaminoglycans. Chemical Communications, 2010, 46, 4124.	4.1	29
24	Disruption of Rosetting in Plasmodium falciparum Malaria with Chemically Modified Heparin and Low Molecular Weight Derivatives Possessing Reduced Anticoagulant and Other Serine Protease Inhibition Activities. Journal of Medicinal Chemistry, 2008, 51, 1453-1458.	6.4	26
25	Construction and use of a library of bona fide heparins employing 1H NMR and multivariate analysis. Analyst, The, 2011, 136, 1380.	3.5	26
26	Subverting the mechanisms of cell death: flavivirus manipulation of host cell responses to infection. Biochemical Society Transactions, 2018, 46, 609-617.	3.4	26
27	The potential for circular dichroism as an additional facile and sensitive method of monitoring low-molecular-weight heparins and heparinoids. Thrombosis and Haemostasis, 2009, 102, 874-878.	3.4	25
28	Spectroscopic and Theoretical Approaches for the Determination of Heparin Saccharide Structure and the Study of Protein-Glycosaminoglycan Complexes in Solution. Current Medicinal Chemistry, 2009, 16, 4750-4766.	2.4	25
29	A New Approach for Heparin Standardization: Combination of Scanning UV Spectroscopy, Nuclear Magnetic Resonance and Principal Component Analysis. PLoS ONE, 2011, 6, e15970.	2.5	25
30	Analysis of the fibroblast growth factor receptor (<scp>FGFR</scp>) signalling network with heparin as coreceptor: evidence for the expansion of the core <scp>FGFR</scp> signalling network. FEBS Journal, 2013, 280, 2260-2270.	4.7	24
31	Antithrombin stabilisation by sulfated carbohydrates correlates with anticoagulant activity. MedChemComm, 2013, 4, 870.	3.4	24
32	Unravelling Structural Information from Complex Mixtures Utilizing Correlation Spectroscopy Applied to HSQC Spectra. Analytical Chemistry, 2013, 85, 7487-7493.	6.5	24
33	O-acetylation of typhoid capsular polysaccharide confers polysaccharide rigidity and immunodominance by masking additional epitopes. Vaccine, 2019, 37, 3866-3875.	3.8	24
34	High-sensitivity visualisation of contaminants in heparin samples by spectral filtering of 1H NMR spectra. Analyst, The, 2011, 136, 1390.	3.5	23
35	How To Find a Needle (or Anything Else) in a Haystack: Two-Dimensional Correlation Spectroscopy-Filtering with Iterative Random Sampling Applied to Pharmaceutical Heparin. Analytical Chemistry, 2012, 84, 6841-6847.	6.5	22
36	Heparin derivatives for the targeting of multiple activities in the inflammatory response. Carbohydrate Polymers, 2015, 117, 400-407.	10.2	22

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37	Conformational degeneracy restricts the effective information content of heparan sulfate. Molecular BioSystems, 2010, 6, 902.	2.9	21
38	Selective Detection of Protein Secondary Structural Changes in Solution Proteinâˆ’Polysaccharide Complexes Using Vibrational Circular Dichroism (VCD). Journal of the American Chemical Society, 2008, 130, 2138-2139.	13.7	19
39	Cations Modulate Polysaccharide Structure To Determine FGFâˆ’FGFR Signaling: A Comparison of Signaling and Inhibitory Polysaccharide Interactions with FGF-1 in Solution. Biochemistry, 2009, 48, 4772-4779.	2.5	16
40	A robust method to quantify low molecular weight contaminants in heparin: detection of tris(2-n-butoxyethyl) phosphate. Analyst, The, 2011, 136, 2330.	3.5	16
41	Low molecular weight heparins: Structural differentiation by spectroscopic and multivariate approaches. Carbohydrate Polymers, 2011, 85, 903-909.	10.2	16
42	Multiomics Analyses of HNF4Î± Protein Domain Function during Human Pluripotent Stem Cell Differentiation. IScience, 2019, 16, 206-217.	4.1	15
43	Insights into the Human Glycan Receptor Conformation of 1918 Pandemic Hemagglutininâ€“Glycan Complexes Derived from Nuclear Magnetic Resonance and Molecular Dynamics Studies. Biochemistry, 2014, 53, 4122-4135.	2.5	14
44	High-throughput SRCD using multi-well plates and its applications. Scientific Reports, 2016, 6, 38028.	3.3	14
45	Recent innovations in the structural analysis of heparin. International Journal of Cardiology, 2016, 212, S5-S9.	1.7	14
46	Nuclear Magnetic Resonance and Molecular Dynamics Simulation of the Interaction between Recognition Protein H7 of the Novel Influenza Virus H7N9 and Glycan Cell Surface Receptors. Biochemistry, 2016, 55, 6605-6616.	2.5	12
47	Survey of peptide quantification methods and comparison of their reproducibility: A case study using oxytocin. Journal of Pharmaceutical and Biomedical Analysis, 2019, 166, 105-112.	2.8	11
48	On the catalytic mechanism of polysaccharide lyases: evidence of His and Tyr involvement in heparin lysis by heparinase I and the role of Ca²⁺. Molecular BioSystems, 2014, 10, 54-64.	2.9	9
49	Multivariate analysis applied to complex biological medicines. Faraday Discussions, 2019, 218, 303-316.	3.2	9
50	NMR spectroscopy and chemometric models to detect a specific non-porcine ruminant contaminant in pharmaceutical heparin. Journal of Pharmaceutical and Biomedical Analysis, 2022, 214, 114724.	2.8	9
51	Fundamental differences in model cell-surface polysaccharides revealed by complementary optical and spectroscopic techniques. Soft Matter, 2012, 8, 6521.	2.7	7
52	A zinc complex of heparan sulfate destabilises lysozyme and alters its conformation. Biochemical and Biophysical Research Communications, 2012, 425, 794-799.	2.1	7
53	Investigating the relationship between temperature, conformation and calcium binding in heparin model oligosaccharides. Carbohydrate Research, 2017, 438, 58-64.	2.3	7
54	Evaluation of Critical Quality Attributes of a Pentavalent (A, C, Y, W, X) Meningococcal Conjugate Vaccine for Global Use. Pathogens, 2021, 10, 928.	2.8	7

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55	Using NMR to Dissect the Chemical Space and <i>O</i>-Sulfation Effects within the <i>O</i>- and <i>S</i>-Glycoside Analogues of Heparan Sulfate. ACS Omega, 2022, 7, 24461-24467.	3.5	6
56	A gravimetric analysis of proteinâ€"oligosaccharide interactions. Biochemical Society Transactions, 2003, 31, 349-351.	3.4	5
57	Heparan sulphate, its derivatives and analogues share structural characteristics that can be exploited, particularly in inhibiting microbial attachment. Brazilian Journal of Medical and Biological Research, 2012, 45, 386-391.	1.5	5
58	Heparan sulfate phage display antibodies recognise epitopes defined by a combination of sugar sequence and cation binding. Organic and Biomolecular Chemistry, 2015, 13, 6066-6072.	2.8	5
59	19F labelled glycosaminoglycan probes for solution NMR and non-linear (CARS) microscopy. Glycoconjugate Journal, 2017, 34, 405-410.	2.7	5
60	The latent ampholytic nature of glycosaminoglycan (GAG) oligosaccharides facilitates their separation by isoelectric focusing. Analytical Methods, 2010, 2, 1550.	2.7	4
61	Following Proteinâ€"Glycosaminoglycan Polysaccharide Interactions with Differential Scanning Fluorimetry. Methods in Molecular Biology, 2012, 836, 171-182.	0.9	4
62	Surface-Based Studies of Heparin/Heparan Sulfate-Protein Interactions: Considerations for Surface Immobilisation of HS/Heparin Saccharides and Monitoring Their Interactions with Binding Proteins. , 2005, , 345-366.		2
63	Data mining and visualisation: general discussion. Faraday Discussions, 2019, 218, 354-371.	3.2	2
64	MD simulation of the interaction between sialoglycans and the second sialic acid binding site of influenza A virus N1 neuraminidase. Biochemical Journal, 2021, 478, 423-441.	3.7	2
65	Detection of interaction between protein trytophan residues and small or macromolecular ligands by synchrotron radiation magnetic circular dichroism. Analytical Methods, 2015, 7, 1667-1671.	2.7	1
66	Editorial: Heparin and Related Polysaccharides. Frontiers in Medicine, 2020, 7, 211.	2.6	1
67	CHAPTER 14. New Methods for the Analysis of Heterogeneous Polysaccharides â€" Lessons Learned from the Heparin Crisis. New Developments in NMR, 0, , 305-334.	0.1	1
68	NMR in the Characterization of Complex Mixture Drugs. AAPS Advances in the Pharmaceutical Sciences Series, 2019, , 115-137.	0.6	0
69	The interaction between oxytocin and heparin. RSC Advances, 2020, 10, 28300-28313.	3.6	0