

# Sriram Neelamegham

## List of Publications by Year in descending order

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110  
papers

4,335  
citations

87888

38  
h-index

128289

60  
g-index

120  
all docs

120  
docs citations

120  
times ranked

5813  
citing authors

#	ARTICLE	IF	CITATIONS
1	Updates to the Symbol Nomenclature for Glycans guidelines. <i>Glycobiology</i> , 2019, 29, 620-624.	2.5	292
2	The microRNA regulatory landscape of MSC-derived exosomes: a systems view. <i>Scientific Reports</i> , 2018, 8, 1419.	3.3	266
3	Aspects of hydrodynamic shear regulating shear-induced platelet activation and self-association of von Willebrand factor in suspension. <i>Blood</i> , 2003, 101, 2637-2645.	1.4	210
4	Acquired von Willebrand syndrome associated with left ventricular assist device. <i>Blood</i> , 2016, 127, 3133-3141.	1.4	185
5	Inhibition of SARS-CoV-2 viral entry upon blocking N- and O-glycan elaboration. <i>ELife</i> , 2020, 9, .	6.0	165
6	Venous Levels of Shear Support Neutrophil-Platelet Adhesion and Neutrophil Aggregation in Blood via P-Selectin and $\beta_2$ -Integrin. <i>Circulation</i> , 1998, 98, 873-882.	1.6	146
7	Sequential binding of CD11a/CD18 and CD11b/CD18 defines neutrophil capture and stable adhesion to intercellular adhesion molecule-1. <i>Blood</i> , 2000, 95, 911-920.	1.4	123
8	Functionalization of cobalt porphyrin-phospholipid bilayers with his-tagged ligands and antigens. <i>Nature Chemistry</i> , 2015, 7, 438-446.	13.6	112
9	Fluid Shear Induces Conformation Change in Human Blood Protein von Willebrand Factor in Solution. <i>Biophysical Journal</i> , 2009, 96, 2313-2320.	0.5	88
10	Role of fluid shear stress in regulating VWF structure, function and related blood disorders. <i>Biorheology</i> , 2016, 52, 319-335.	0.4	82
11	von Willebrand factor self-association on platelet GpIb under hydrodynamic shear: effect on shear-induced platelet activation. <i>Blood</i> , 2010, 116, 3990-3998.	1.4	75
12	Community evaluation of glycoproteomics informatics solutions reveals high-performance search strategies for serum glycopeptide analysis. <i>Nature Methods</i> , 2021, 18, 1304-1316.	19.0	74
13	Silencing $\alpha$ 1,3-Fucosyltransferases in Human Leukocytes Reveals a Role for FUT9 Enzyme during E-selectin-mediated Cell Adhesion. <i>Journal of Biological Chemistry</i> , 2013, 288, 1620-1633.	3.4	72
14	Affinity and Kinetics of Sialyl Lewis-X and Core-2 Based Oligosaccharides Binding to L- and P-Selectin. <i>Biochemistry</i> , 2005, 44, 9507-9519.	2.5	71
15	Immune complexes formed following the binding of anti-platelet factor 4 (CXCL4) antibodies to CXCL4 stimulate human neutrophil activation and cell adhesion. <i>Blood</i> , 2008, 112, 1091-1100.	1.4	71
16	ST3Gal-4 is the primary sialyltransferase regulating the synthesis of E-, P-, and L-selectin ligands on human myeloid leukocytes. <i>Blood</i> , 2015, 125, 687-696.	1.4	70
17	DrawGlycan-SNFG: a robust tool to render glycans and glycopeptides with fragmentation information. <i>Glycobiology</i> , 2017, 27, 200-205.	2.5	70
18	Multi-level regulation of cellular glycosylation: from genes to transcript to enzyme to structure. <i>Current Opinion in Structural Biology</i> , 2016, 40, 145-152.	5.7	67

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19	Hydrodynamic Shear Shows Distinct Roles for LFA-1 and Mac-1 in Neutrophil Adhesion to Inter-cellular Adhesion Molecule-1. <i>Blood</i> , 1998, 92, 1626-1638.	1.4	65
20	Solution Structure of Human von Willebrand Factor Studied Using Small Angle Neutron Scattering*. <i>Journal of Biological Chemistry</i> , 2006, 281, 38266-38275.	3.4	60
21	Selectins and Immune Cells in Acute Myocardial Infarction and Post-infarction Ventricular Remodeling: Pathophysiology and Novel Treatments. <i>Frontiers in Immunology</i> , 2019, 10, 300.	4.8	60
22	Fluorinated per-acetylated GalNAc metabolically alters glycan structures on leukocyte PSGL-1 and reduces cell binding to selectins. <i>Blood</i> , 2010, 115, 1303-1312.	1.4	59
23	Peracetylated 4-Fluoro-glucosamine Reduces the Content and Repertoire of N- and O-Glycans without Direct Incorporation. <i>Journal of Biological Chemistry</i> , 2011, 286, 21717-21731.	3.4	59
24	Disruption of C1galt1 Gene Promotes Development and Metastasis of Pancreatic Adenocarcinomas in Mice. <i>Gastroenterology</i> , 2018, 155, 1608-1624.	1.3	59
25	Sensitivity, principal component and flux analysis applied to signal transduction: the case of epidermal growth factor mediated signaling. <i>Bioinformatics</i> , 2005, 21, 1194-1202.	4.1	58
26	Hydrodynamic Forces Applied on Inter-cellular Bonds, Soluble Molecules, and Cell-Surface Receptors. <i>Biophysical Journal</i> , 2004, 86, 576-588.	0.5	57
27	Shear and Time-Dependent Changes in Mac-1, LFA-1, and ICAM-3 Binding Regulate Neutrophil Homotypic Adhesion. <i>Journal of Immunology</i> , 2000, 164, 3798-3805.	0.8	56
28	Estimating the Efficiency of Cell Capture and Arrest in Flow Chambers: Study of Neutrophil Binding via E-selectin and ICAM-1. <i>Biophysical Journal</i> , 2002, 83, 1934-1952.	0.5	50
29	Synthesis and Application of Fluorescein-Labeled Pluronic Block Copolymers to the Study of Polymer-Surface Interactions. <i>Langmuir</i> , 2001, 17, 537-546.	3.5	49
30	The pattern of glycosyl- and sulfotransferase activities in cancer cell lines: a predictor of individual cancer-associated distinct carbohydrate structures for the structural identification of signature glycans. <i>Carbohydrate Research</i> , 2006, 341, 983-994.	2.3	48
31	Using CRISPR-Cas9 to quantify the contributions of O-glycans, N-glycans and Glycosphingolipids to human leukocyte-endothelium adhesion. <i>Scientific Reports</i> , 2016, 6, 30392.	3.3	47
32	Systems glycobiology: biochemical reaction networks regulating glycan structure and function. <i>Glycobiology</i> , 2011, 21, 1541-1553.	2.5	46
33	The use of surface immobilization of P-selectin glycoprotein ligand-1 on mesenchymal stem cells to facilitate selectin mediated cell tethering and rolling. <i>Biomaterials</i> , 2013, 34, 8213-8222.	11.4	45
34	Systems-level studies of glycosyltransferase gene expression and enzyme activity that are associated with the selectin binding function of human leukocytes. <i>FASEB Journal</i> , 2008, 22, 4154-4167.	0.5	44
35	Systems-level modeling of cellular glycosylation reaction networks: O-linked glycan formation on natural selectin ligands. <i>Bioinformatics</i> , 2008, 24, 2740-2747.	4.1	44
36	Competition between Core-2 GlcNAc-transferase and ST6GalNAc-transferase Regulates the Synthesis of the Leukocyte Selectin Ligand on Human P-selectin Glycoprotein Ligand-1. <i>Journal of Biological Chemistry</i> , 2013, 288, 13974-13987.	3.4	44

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37	A Comprehensive, Open-source Platform for Mass Spectrometry-based Glycoproteomics Data Analysis. <i>Molecular and Cellular Proteomics</i> , 2017, 16, 2032-2047.	3.8	44
38	Microclot array elastometry for integrated measurement of thrombus formation and clot biomechanics under fluid shear. <i>Nature Communications</i> , 2019, 10, 2051.	12.8	44
39	Cell surface glycoengineering improves selectin-mediated adhesion of mesenchymal stem cells (MSCs) and cardiosphere-derived cells (CDCs): Pilot validation in porcine ischemia-reperfusion model. <i>Biomaterials</i> , 2016, 74, 19-30.	11.4	41
40	$\beta$ 2-Integrins mediate stable adhesion in collisional interactions between neutrophils and ICAM-1-expressing cells. <i>Journal of Leukocyte Biology</i> , 1998, 64, 622-630.	3.3	35
41	Application of microfluidic devices in studies of thrombosis and hemostasis. <i>Platelets</i> , 2017, 28, 434-440.	2.3	33
42	Glycosphingolipids on Human Myeloid Cells Stabilize E-Selectin-Dependent Rolling in the Multistep Leukocyte Adhesion Cascade. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2016, 36, 718-727.	2.4	32
43	The Ability of Poloxamers to Inhibit Platelet Aggregation Depends on their Physicochemical Properties. <i>Thrombosis and Haemostasis</i> , 2001, 86, 1532-1539.	3.4	30
44	von Willebrand factor self-association is regulated by the shear-dependent unfolding of the A2 domain. <i>Blood Advances</i> , 2019, 3, 957-968.	5.2	30
45	Application of Fluorescence Spectroscopy to Quantify Shear-Induced Protein Conformation Change. <i>Biophysical Journal</i> , 2009, 97, 2567-2576.	0.5	29
46	A Computational Framework for the Automated Construction of Glycosylation Reaction Networks. <i>PLoS ONE</i> , 2014, 9, e100939.	2.5	29
47	Analysis of the Specificity of Sialyltransferases toward Mucin Core 2, Globo, and Related Structures. Identification of the Sialylation Sequence and the Effects of Sulfate, Fucose, Methyl, and Fluoro Substituents of the Carbohydrate Chain in the Biosynthesis of Selectin and Siglec Ligands, and Novel Sialylation by Cloned $\beta$ 2,3(O)Sialyltransferase. <i>Biochemistry</i> , 2005, 44, 15619-15635.	2.5	28
48	Lipoxin A <sub>4</sub> inhibits immune cell binding to salivary epithelium and vascular endothelium. <i>American Journal of Physiology - Cell Physiology</i> , 2012, 302, C968-C978.	4.6	28
49	Nonlinear Flow Affects Hydrodynamic Forces and Neutrophil Adhesion Rates in Cone-Plate Viscometers. <i>Biophysical Journal</i> , 2001, 80, 2631-2648.	0.5	27
50	Transport Features, Reaction Kinetics and Receptor Biomechanics Controlling Selectin and Integrin Mediated Cell Adhesion. <i>Cell Communication and Adhesion</i> , 2004, 11, 35-50.	1.0	27
51	Thioglycosides Are Efficient Metabolic Decoys of Glycosylation that Reduce Selectin Dependent Leukocyte Adhesion. <i>Cell Chemical Biology</i> , 2018, 25, 1519-1532.e5.	5.2	27
52	von Willebrand factor (VWF) propeptide binding to VWF D $\beta$ 3 domain attenuates platelet activation and adhesion. <i>Blood</i> , 2012, 119, 4769-4778.	1.4	26
53	Glycosylation Network Analysis Toolbox: a MATLAB-based environment for systems glycobiochemistry. <i>Bioinformatics</i> , 2013, 29, 404-406.	4.1	26
54	Overexpression of $\beta$ 2,3sialyl T-antigen in breast cancer determined by miniaturized glycosyltransferase assays and confirmed using tissue microarray immunohistochemical analysis. <i>Glycoconjugate Journal</i> , 2014, 31, 509-521.	2.7	26

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55	Biomechanics of P-Selectin PSGL-1 Bonds: Shear Threshold and Integrin-Independent Cell Adhesion. <i>Biophysical Journal</i> , 2006, 90, 2221-2234.	0.5	24
56	Reversible Sialylation: Synthesis of Cytidine 5'-Monophospho-N-acetylneuraminic Acid from Cytidine 5'-Monophosphate with 2,3-Sialyl O-Glycan-, Glycolipid-, and Macromolecule-Based Donors Yields Diverse Sialylated Products. <i>Biochemistry</i> , 2008, 47, 320-330.	2.5	24
57	A GlycoGene CRISPR-Cas9 lentiviral library to study lectin binding and human glycan biosynthesis pathways. <i>Glycobiology</i> , 2021, 31, 173-180.	2.5	24
58	Integration of systems glycobiology with bioinformatics toolboxes, glycoinformatics resources, and glycoproteomics data. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 2015, 7, 163-181.	6.6	23
59	A systematic analysis of acceptor specificity and reaction kinetics of five human 2,3-sialyltransferases: Product inhibition studies illustrate reaction mechanism for ST3Gal-I. <i>Biochemical and Biophysical Research Communications</i> , 2016, 469, 606-612.	2.1	23
60	Platelet GpIb Binding to von Willebrand Factor Under Fluid Shear: Contributions of the D'D3 Domain, A1 Domain Flanking Peptide and O-Linked Glycans. <i>Journal of the American Heart Association</i> , 2014, 3, e001420.	3.7	22
61	Doxycycline-Dependent Self-Inactivation of CRISPR-Cas9 to Temporally Regulate On- and Off-Target Editing. <i>Molecular Therapy</i> , 2020, 28, 29-41.	8.2	21
62	B cells suppress medullary granulopoiesis by an extracellular glycosylation-dependent mechanism. <i>ELife</i> , 2019, 8, .	6.0	21
63	The Multistep Process of Homotypic Neutrophil Aggregation: A Review of the Molecules and Effects of Hydrodynamics. <i>Cell Adhesion and Communication</i> , 1998, 6, 263-276.	1.7	20
64	Identification of Physiologically Relevant Substrates for Cloned Gal: 3-O-Sulfotransferases (Gal3STs). <i>Journal of Biological Chemistry</i> , 2004, 279, 10032-10041.	3.4	18
65	Distinct glycosyltransferases synthesize E-selectin ligands in human vs. mouse leukocytes. <i>Cell Adhesion and Migration</i> , 2013, 7, 288-292.	2.7	18
66	Recombinant Sialyltransferase Infusion Mitigates Infection-Driven Acute Lung Inflammation. <i>Frontiers in Immunology</i> , 2019, 10, 48.	4.8	18
67	Escherichia coli-derived von Willebrand factor-A2 domain fluorescence/resonance energy transfer proteins that quantify ADAMTS13 activity. <i>Analytical Biochemistry</i> , 2011, 410, 206-213.	2.4	15
68	N-acetyl-2-D-hexosaminidases mediate the generation of paucimannosidic proteins via a putative noncanonical truncation pathway in human neutrophils. <i>Glycobiology</i> , 2022, 32, 218-229.	2.5	15
69	Understanding Glycomechanics Using Mathematical Modeling: A Review of Current Approaches to Simulate Cellular Glycosylation Reaction Networks. <i>Annals of Biomedical Engineering</i> , 2012, 40, 816-827.	2.5	14
70	Novel interactions of complex carbohydrates with peanut (PNA), Ricinus communis (RCA-I), Sambucus nigra (SNA-I) and wheat germ (WGA) agglutinins as revealed by the binding specificities of these lectins towards mucin core-2 O-linked and N-linked glycans and related structures. <i>Glycoconjugate Journal</i> , 2016, 33, 819-836.	2.7	14
71	A consensus-based and readable extension of LiCo for Reaction Rules (LiCoRR). <i>Beilstein Journal of Organic Chemistry</i> , 2020, 16, 2645-2662.	2.2	14
72	Characterization of Cancer Associated Mucin Type O-Glycans Using the Exchange Sialylation Properties of Mammalian Sialyltransferase ST3Gal-II. <i>Journal of Proteome Research</i> , 2012, 11, 2609-2618.	3.7	13

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73	Robustness in glycosylation systems: effect of modified monosaccharides, acceptor decoys and azido sugars on cellular nucleotide-sugar levels and pattern of N-linked glycosylation. <i>Molecular Omics</i> , 2020, 16, 377-386.	2.8	13
74	Leukocyte-borne $\alpha(1,3)$ -fucose is a negative regulator of $\alpha(2)$ -integrin-dependent recruitment in lung inflammation. <i>Journal of Leukocyte Biology</i> , 2017, 101, 459-470.	3.3	12
75	Local complement factor H protects kidney endothelial cell structure and function. <i>Kidney International</i> , 2021, 100, 824-836.	5.2	12
76	Cooperativity Between Selectins and $\alpha(2)$ -Integrins Define Neutrophil Capture and Stable Adhesion in Shear Flow. <i>Annals of Biomedical Engineering</i> , 2004, 32, 1179-1192.	2.5	11
77	Mammalian Sialyltransferase ST3Gal-II: Its Exchange Sialylation Catalytic Properties Allow Labeling of Sialyl Residues in Mucin-Type Sialylated Glycoproteins and Specific Gangliosides. <i>Biochemistry</i> , 2011, 50, 9475-9487.	2.5	11
78	Scaling down the size and increasing the throughput of glycosyltransferase assays: Activity changes on stem cell differentiation. <i>Analytical Biochemistry</i> , 2012, 425, 135-144.	2.4	11
79	Role of calcium in regulating the intra- and extracellular cleavage of von Willebrand factor by the protease ADAMTS13. <i>Blood Advances</i> , 2017, 1, 2063-2074.	5.2	11
80	Efficient inhibition of O-glycan biosynthesis using the hexosamine analog Ac5GalNTGc. <i>Cell Chemical Biology</i> , 2021, 28, 699-710.e5.	5.2	11
81	Induction of homotypic lymphocyte aggregation: evidence for a novel activation state of the $\alpha(1)$ integrin. <i>Journal of Leukocyte Biology</i> , 1996, 59, 872-882.	3.3	10
82	An analysis tool to quantify the efficiency of cell tethering and firm-adhesion in the parallel-plate flow chamber. <i>Journal of Immunological Methods</i> , 2003, 278, 305-317.	1.4	10
83	In silico Biochemical Reaction Network Analysis (IBRENA): a package for simulation and analysis of reaction networks. <i>Bioinformatics</i> , 2008, 24, 1109-1111.	4.1	10
84	Disulfide trapping of protein complexes on the yeast surface. <i>Biotechnology and Bioengineering</i> , 2010, 106, 27-41.	3.3	10
85	DrawGlycan-SNFG and gpAnnotate: rendering glycans and annotating glycopeptide mass spectra. <i>Bioinformatics</i> , 2020, 36, 1942-1943.	4.1	10
86	Sulfonated Polyethylenimine for Photosensitizer Conjugation and Targeting. <i>Bioconjugate Chemistry</i> , 2015, 26, 1633-1639.	3.6	9
87	Bimodal Targeting Using Sulfonated, Mannosylated PEI for Combined Gene Delivery and Photodynamic Therapy. <i>Photochemistry and Photobiology</i> , 2017, 93, 600-608.	2.5	7
88	Surfactant-stripped Cabazitaxel Micelles Stabilized by Clotrimazole or Mifepristone. <i>Advanced Therapeutics</i> , 2020, 3, 1900161.	3.2	7
89	A systems-based framework to computationally describe putative transcription factors and signaling pathways regulating glycan biosynthesis. <i>Beilstein Journal of Organic Chemistry</i> , 2021, 17, 1712-1724.	2.2	7
90	Quantitative Measurement of Selectin-Ligand Interactions: Assays to Identify a Sweet Pill in a Library of Carbohydrates. , 2006, 347, 343-358.		6

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91	Detection of site-specific glycosylation in proteins using flow cytometry. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2009, 75A, 866-873.	1.5	6
92	Current challenges for the targeted delivery and molecular imaging of stem cells in animal models. <i>Bioengineered</i> , 2017, 8, 316-324.	3.2	6
93	Identification of cell-surface glycans that mediate motility-dependent binding and internalization of <i>Pseudomonas aeruginosa</i> by phagocytes. <i>Molecular Immunology</i> , 2021, 131, 68-77.	2.2	6
94	Differential Regulation of Neutrophil CD18 Integrin Function by Di- and Tri-Valent Cations: Manganese vs. Gadolinium. <i>Annals of Biomedical Engineering</i> , 2008, 36, 647-660.	2.5	4
95	Cellular and Molecular Engineering of Glycan Sialylation in Heterologous Systems. <i>Molecules</i> , 2021, 26, 5950.	3.8	4
96	A quantitative assay for intercellular aggregation. <i>Annals of Biomedical Engineering</i> , 1997, 25, 180-189.	2.5	3
97	Liposomes Containing Ligands: Binding Specificity to Selectins. , 2002, 199, 175-192.		2
98	PPLATE: a computer program for analysis of parallel-plate flow chamber experimental data. <i>Journal of Immunological Methods</i> , 2003, 278, 319-321.	1.4	2
99	Harry L. Goldsmith, Ph.D.. <i>Annals of Biomedical Engineering</i> , 2008, 36, 523-526.	2.5	2
100	Labeling of Erythrocytes by Porphyrin-Phospholipid. <i>Advanced NanoBiomed Research</i> , 2021, 1, 2000013.	3.6	2
101	Detection of Plasma Protease Activity Using Microsphere-Cytometry Assays with <i>E. coli</i> Derived Substrates: VWF Proteolysis by ADAMTS13. <i>PLoS ONE</i> , 2015, 10, e0126556.	2.5	2
102	Comparative Glycomics Analysis of Mass Spectrometry Data. <i>Methods in Molecular Biology</i> , 2022, 2370, 97-113.	0.9	2
103	Human GlycoEnzymes and Related Genes. , 2023, , 452-472.		2
104	The computing platelet: integrating environmental cues. <i>Blood</i> , 2012, 120, 3-4.	1.4	1
105	Neutrophils aid cellular therapeutics by enhancing glycoengineered stem cell recruitment and retention at sites of inflammation. <i>Biomaterials</i> , 2021, 276, 121048.	11.4	1
106	Forward Genetic Screens of Human Glycosylation Pathways Using the GlycoGene CRISPR Library. <i>Current Protocols</i> , 2022, 2, e402.	2.9	1
107	Preface to Special Issue: "Glycomechanics: Sugar Coating Blood Cell-Endothelial Interactions in Shear Flow". <i>Annals of Biomedical Engineering</i> , 2012, 40, 764-765.	2.5	0
108	Compartmental Glycosylation Flux Analysis. <i>IFAC-PapersOnLine</i> , 2021, 54, 287-293.	0.9	0

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109	Solution structure of human blood protein Von Willebrand factor. FASEB Journal, 2006, 20, A657.	0.5	0
110	Affinity and kinetics of selectin-carbohydrate interaction. FASEB Journal, 2006, 20, .	0.5	0