

# Rajanikanth Vadigepalli

## 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.

109  
papers

1,366  
citations

21  
h-index

32  
g-index

138  
ext. papers

1,797  
ext. citations

3.5  
avg, IF

4.43  
L-index

#	Paper	IF	Citations
109	Neuroinflammation, Glia, and Cytokines: Networks of Networks <b>2022</b> , 2281-2287		
108	Retinoic Acid Fluctuation Activates an Uneven, Direction-Dependent Network-Wide Robustness Response in Early Embryogenesis. <i>Frontiers in Cell and Developmental Biology</i> , <b>2021</b> , 9, 747969	5.7	1
107	Single Cell Scale Neuronal and Glial Gene Expression and Putative Cell Phenotypes and Networks in the Nucleus Tractus Solitarius in an Alcohol Withdrawal Time Series. <i>Frontiers in Systems Neuroscience</i> , <b>2021</b> , 15, 739790	3.5	
106	A Spatial Model of Hepatic Calcium Signaling and Glucose Metabolism Under Autonomic Control Reveals Functional Consequences of Varying Liver Innervation Patterns Across Species.. <i>Frontiers in Physiology</i> , <b>2021</b> , 12, 748962	4.6	
105	Input-output signal processing plasticity of vagal motor neurons in response to cardiac ischemic injury. <i>IScience</i> , <b>2021</b> , 24, 102143	6.1	0
104	Innervation and Neuronal Control of the Mammalian Sinoatrial Node a Comprehensive Atlas. <i>Circulation Research</i> , <b>2021</b> , 128, 1279-1296	15.7	19
103	A single cell transcriptomics map of paracrine networks in the intrinsic cardiac nervous system. <i>IScience</i> , <b>2021</b> , 24, 102713	6.1	4
102	3D single cell scale anatomical map of sex-dependent variability of the rat intrinsic cardiac nervous system. <i>IScience</i> , <b>2021</b> , 24, 102795	6.1	1
101	Integrated Multiomics Reveals Glucose Use Reprogramming and Identifies a Novel Hexokinase in Alcoholic Hepatitis. <i>Gastroenterology</i> , <b>2021</b> , 160, 1725-1740.e2	13.3	5
100	Credible practice of modeling and simulation in healthcare: ten rules from a multidisciplinary perspective. <i>Journal of Translational Medicine</i> , <b>2020</b> , 18, 369	8.5	22
99	Diurnal Patterns of Gene Expression in the Dorsal Vagal Complex and the Central Nucleus of the Amygdala - Non-rhythm-generating Brain Regions. <i>Frontiers in Neuroscience</i> , <b>2020</b> , 14, 375	5.1	1
98	A Comprehensive Integrated Anatomical and Molecular Atlas of Rat Intrinsic Cardiac Nervous System. <i>IScience</i> , <b>2020</b> , 23, 101140	6.1	19
97	Investigating the Effects of Brainstem Neuronal Adaptation on Cardiovascular Homeostasis. <i>Frontiers in Neuroscience</i> , <b>2020</b> , 14, 470	5.1	3
96	Combining Laser Capture Microdissection and Microfluidic qPCR to Analyze Transcriptional Profiles of Single Cells: A Systems Biology Approach to Opioid Dependence. <i>Journal of Visualized Experiments</i> , <b>2020</b> ,	1.6	4
95	A Novel Mouse Model of Acute-on-Chronic Cholestatic Alcoholic Liver Disease: A Systems Biology Comparison With Human Alcoholic Hepatitis. <i>Alcoholism: Clinical and Experimental Research</i> , <b>2020</b> , 44, 87-101	3.7	1
94	Inflammation-associated suppression of metabolic gene networks in acute and chronic liver disease. <i>Archives of Toxicology</i> , <b>2020</b> , 94, 205-217	5.8	15
93	Hepatic lipocalin 2 promotes liver fibrosis and portal hypertension. <i>Scientific Reports</i> , <b>2020</b> , 10, 15558	4.9	5

92	Model-based virtual patient analysis of human liver regeneration predicts critical perioperative factors controlling the dynamic mode of response to resection. <i>BMC Systems Biology</i> , <b>2019</b> , 13, 9	3.5	0
91	Single-Cell Glia and Neuron Gene Expression in the Central Amygdala in Opioid Withdrawal Suggests Inflammation With Correlated Gut Dysbiosis. <i>Frontiers in Neuroscience</i> , <b>2019</b> , 13, 665	5.1	19
90	Single-Cell Gene Expression Analysis Identifies Chronic Alcohol-Mediated Shift in Hepatocyte Molecular States After Partial Hepatectomy. <i>Gene Expression</i> , <b>2019</b> , 19, 97-119	3.4	5
89	Investigating Single-cell Transcriptome Dynamics of the Dorsal Motor Nucleus of the Vagus (DMV) in a Rat Model of Remote Ischemic-Reperfusion Cardioprotection (RIPC). <i>FASEB Journal</i> , <b>2019</b> , 33, 742.3	0.9	
88	Intrinsic Cardiac Ganglionic Neurons Projecting to the SA node in the Rat and Pig Hearts: Retrograde Labeling and Neurolucida 3-D Reconstruction. <i>FASEB Journal</i> , <b>2019</b> , 33, 773.2	0.9	
87	High-Resolution Chronology of Murine Biological Responses to 70% Partial Hepatectomy. <i>FASEB Journal</i> , <b>2019</b> , 33, 496.44	0.9	
86	SPSNet: subpopulation-sensitive network-based analysis of heterogeneous gene expression data. <i>BMC Systems Biology</i> , <b>2018</b> , 12, 28	3.5	3
85	Introduction to the Virtual Issue Alcohol and Epigenetic Regulation: Do the Products of Alcohol Metabolism Drive Epigenetic Control of Gene Expression in Alcohol-Related Disorders?. <i>Alcoholism: Clinical and Experimental Research</i> , <b>2018</b> , 42, 845-848	3.7	8
84	Credibility, Replicability, and Reproducibility in Simulation for Biomedicine and Clinical Applications in Neuroscience. <i>Frontiers in Neuroinformatics</i> , <b>2018</b> , 12, 18	3.9	21
83	Single Cell Gene Expression Analysis and 3-D Mapping of Cardiac Ganglia. <i>FASEB Journal</i> , <b>2018</b> , 32, 863.6	0.9	
82	Putative MicroRNA Regulatory Networks in Hepatic Stellate Cells Underlying Chronic Ethanol-Mediated Impairment of Liver Regeneration after Partial Hepatectomy. <i>FASEB Journal</i> , <b>2018</b> , 32, 546.5	0.9	
81	Cellular network modeling and single cell gene expression analysis reveals novel hepatic stellate cell phenotypes controlling liver regeneration dynamics. <i>BMC Systems Biology</i> , <b>2018</b> , 12, 86	3.5	5
80	Modeling the Dynamics of Human Liver Failure Post Liver Resection. <i>Processes</i> , <b>2018</b> , 6,	2.9	3
79	Causality Analysis and Cell Network Modeling of Spatial Calcium Signaling Patterns in Liver Lobules. <i>Frontiers in Physiology</i> , <b>2018</b> , 9, 1377	4.6	3
78	Pattern analysis uncovers a chronic ethanol-induced disruption of the switch-like dynamics of C/EBP- $\beta$ and C/EBP- $\delta$ genome-wide binding during liver regeneration. <i>Physiological Genomics</i> , <b>2017</b> , 49, 11-26	3.6	3
77	Novel Influences of IL-10 on CNS Inflammation Revealed by Integrated Analyses of Cytokine Networks and Microglial Morphology. <i>Frontiers in Cellular Neuroscience</i> , <b>2017</b> , 11, 233	6.1	12
76	A data-driven modeling approach to identify disease-specific multi-organ networks driving physiological dysregulation. <i>PLoS Computational Biology</i> , <b>2017</b> , 13, e1005627	5	3
75	Integrated live imaging and molecular profiling of embryoid bodies reveals a synchronized progression of early differentiation. <i>Scientific Reports</i> , <b>2016</b> , 6, 31623	4.9	17

74	A novel comparative pattern analysis approach identifies chronic alcohol mediated dysregulation of transcriptomic dynamics during liver regeneration. <i>BMC Genomics</i> , <b>2016</b> , 17, 260	4.5	11
73	Systemic leukotriene B receptor antagonism lowers arterial blood pressure and improves autonomic function in the spontaneously hypertensive rat. <i>Journal of Physiology</i> , <b>2016</b> , 594, 5975-5989	3.9	14
72	Molecular variability elicits a tunable switch with discrete neuromodulatory response phenotypes. <i>Journal of Computational Neuroscience</i> , <b>2016</b> , 40, 65-82	1.4	4
71	A novel comparative pattern count analysis reveals a chronic ethanol-induced dynamic shift in immediate early NF- $\kappa$ B genome-wide promoter binding during liver regeneration. <i>Molecular BioSystems</i> , <b>2016</b> , 12, 1037-56		3
70	Single-Cell Transcriptional Analysis Reveals Novel Neuronal Phenotypes and Interaction Networks Involved in the Central Circadian Clock. <i>Frontiers in Neuroscience</i> , <b>2016</b> , 10, 481	5.1	34
69	Modeling cytokine regulatory network dynamics driving neuroinflammation in central nervous system disorders. <i>Drug Discovery Today: Disease Models</i> , <b>2016</b> , 19, 59-67	1.3	6
68	Inhibition of miR-21 rescues liver regeneration after partial hepatectomy in ethanol-fed rats. <i>American Journal of Physiology - Renal Physiology</i> , <b>2016</b> , 311, G794-G806	5.1	22
67	Computational Modeling of Spatiotemporal Ca(2+) Signal Propagation Along Hepatocyte Cords. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2016</b> , 63, 2047-55	5	5
66	HuR Contributes to TRAIL Resistance by Restricting Death Receptor 4 Expression in Pancreatic Cancer Cells. <i>Molecular Cancer Research</i> , <b>2016</b> , 14, 599-611	6.6	32
65	Identifying functional gene regulatory network phenotypes underlying single cell transcriptional variability. <i>Progress in Biophysics and Molecular Biology</i> , <b>2015</b> , 117, 87-98	4.7	11
64	Adiponectin fine-tuning of liver regeneration dynamics revealed through cellular network modelling. <i>Journal of Physiology</i> , <b>2015</b> , 593, 365-83	3.9	14
63	MicroRNA network changes in the brain stem underlie the development of hypertension. <i>Physiological Genomics</i> , <b>2015</b> , 47, 388-99	3.6	18
62	Computational modeling of cytokine signaling in microglia. <i>Molecular BioSystems</i> , <b>2015</b> , 11, 3332-46		14
61	Systems analysis of non-parenchymal cell modulation of liver repair across multiple regeneration modes. <i>BMC Systems Biology</i> , <b>2015</b> , 9, 71	3.5	17
60	Intracellular Information Processing through Encoding and Decoding of Dynamic Signaling Features. <i>PLoS Computational Biology</i> , <b>2015</b> , 11, e1004563	5	10
59	In Vivo Zonal Variation and Liver Cell-Type Specific NF- $\kappa$ B Localization after Chronic Adaptation to Ethanol and following Partial Hepatectomy. <i>PLoS ONE</i> , <b>2015</b> , 10, e0140236	3.7	5
58	A novel, dynamic pattern-based analysis of NF- $\kappa$ B binding during the priming phase of liver regeneration reveals switch-like functional regulation of target genes. <i>Frontiers in Physiology</i> , <b>2015</b> , 6, 189	4.6	6
57	Computational Modeling as an Approach to Study the Cellular and Molecular Regulatory Networks Driving Liver Regeneration <b>2015</b> , 185-198		1

56	Multiscale model of dynamic neuromodulation integrating neuropeptide-induced signaling pathway activity with membrane electrophysiology. <i>Biophysical Journal</i> , <b>2015</b> , 108, 211-23	2.9	4
55	Dynamic Regulation of microRNA Networks in the Brainstem Characterize Hypertension Development. <i>FASEB Journal</i> , <b>2015</b> , 29, 984.12	0.9	
54	Integrated Computational Model of Intracellular Signaling and microRNA Regulation Predicts the Network Balances and Timing Constraints Critical to the Hepatic Stellate Cell Activation Process. <i>Processes</i> , <b>2014</b> , 2, 773-794	2.9	5
53	Optimization of Gene Delivery to Liver Cells Using a Biodegradable Polymer Based Nanoparticles. <i>Journal of Pharmaceutical Sciences and Pharmacology</i> , <b>2014</b> , 1, 141-145		
52	Optimizing In Vivo Gene Delivery to Liver Cells Using Polyethylenimine Based Nanoparticles. <i>Journal of Pharmaceutical Sciences and Pharmacology</i> , <b>2014</b> , 1, 154-159		1
51	Inputs drive cell phenotype variability. <i>Genome Research</i> , <b>2014</b> , 24, 930-41	9.7	28
50	Molecular modeling of ErbB4/HER4 kinase in the context of the HER4 signaling network helps rationalize the effects of clinically identified HER4 somatic mutations on the cell phenotype. <i>Biotechnology Journal</i> , <b>2013</b> , 8, 1452-64	5.6	11
49	Chronic ethanol feeding alters miRNA expression dynamics during liver regeneration. <i>Alcoholism: Clinical and Experimental Research</i> , <b>2013</b> , 37 Suppl 1, E59-69	3.7	53
48	Coordinated dynamic gene expression changes in the central nucleus of the amygdala during alcohol withdrawal. <i>Alcoholism: Clinical and Experimental Research</i> , <b>2013</b> , 37 Suppl 1, E88-100	3.7	14
47	Ethanol alters the balance of Sox2, Oct4, and Nanog expression in distinct subpopulations during differentiation of embryonic stem cells. <i>Stem Cells and Development</i> , <b>2013</b> , 22, 2196-210	4.4	25
46	Dynamic Transcriptomics: Transcriptomic Discovery of a Biological Multiple-Input Multiple-Output Heart Control Mechanism. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2013</b> , 46, 1-5		
45	Ethanol diverts early neuronal differentiation trajectory of embryonic stem cells by disrupting the balance of lineage specifiers. <i>PLoS ONE</i> , <b>2013</b> , 8, e63794	3.7	28
44	Adaptation to chronic alcohol intake alters STAT3 genome-wide binding dynamics during liver regeneration. <i>FASEB Journal</i> , <b>2013</b> , 27, 872.4	0.9	
43	Genome-wide combinatorial transcriptional regulatory dynamics during early onset of liver regeneration and chronic alcohol intake. <i>FASEB Journal</i> , <b>2013</b> , 27, 1161.5	0.9	
42	Rapid temporal changes in the expression of a set of neuromodulatory genes during alcohol withdrawal in the dorsal vagal complex: molecular evidence of homeostatic disturbance. <i>Alcoholism: Clinical and Experimental Research</i> , <b>2012</b> , 36, 1688-700	3.7	10
41	Effects of developmental lead exposure on the hippocampal transcriptome: influences of sex, developmental period, and lead exposure level. <i>Toxicological Sciences</i> , <b>2012</b> , 129, 108-25	4.4	33
40	Adaptive transcriptional dynamics of A2 neurons and central cardiovascular control pathways. <i>Experimental Physiology</i> , <b>2012</b> , 97, 462-8	2.4	2
39	Temporal changes in innate immune signals in a rat model of alcohol withdrawal in emotional and cardiorespiratory homeostatic nuclei. <i>Journal of Neuroinflammation</i> , <b>2012</b> , 9, 97	10.1	41

38	Decorin protein core affects the global gene expression profile of the tumor microenvironment in a triple-negative orthotopic breast carcinoma xenograft model. <i>PLoS ONE</i> , <b>2012</b> , 7, e45559	3.7	70
37	Chronic ethanol feeding enhances miR-21 induction during liver regeneration while inhibiting proliferation in rats. <i>American Journal of Physiology - Renal Physiology</i> , <b>2012</b> , 303, G733-43	5.1	39
36	MicroRNA profiling in lung cancer reveals new molecular markers for diagnosis. <i>Acta Cytologica</i> , <b>2012</b> , 56, 645-54	3	48
35	Integrative gene regulatory network analysis reveals light-induced regional gene expression phase shift programs in the mouse suprachiasmatic nucleus. <i>PLoS ONE</i> , <b>2012</b> , 7, e37833	3.7	14
34	Adaptive Single Neuron Hypertensive Gene Expression Programs in the Nucleus Tractus Solitarius. <i>FASEB Journal</i> , <b>2012</b> , 26, 1035.19	0.9	
33	Genome-wide combinatorial transcriptional regulatory dynamics during early onset of liver regeneration and chronic alcohol intake. <i>FASEB Journal</i> , <b>2012</b> , 26, 274.5	0.9	
32	Profiling candidate housekeeping genes for data normalization in chronic ethanol treated rat liver regeneration model. <i>FASEB Journal</i> , <b>2012</b> , 26, 145.7	0.9	
31	Sex-based differences in gene expression in hippocampus following postnatal lead exposure. <i>Toxicology and Applied Pharmacology</i> , <b>2011</b> , 256, 179-90	4.6	25
30	Ethanol effects on cell cycle related genes in regenerating rat liver. <i>FASEB Journal</i> , <b>2011</b> , 25, 115.3	0.9	
29	Chronic alcohol effects on NF- $\kappa$ B genome-wide binding dynamics during early onset of liver regeneration. <i>FASEB Journal</i> , <b>2011</b> , 25, 998.8	0.9	
28	Ethanol Interferes with Gene Regulatory Networks of Embryonic Stem Cells. <i>FASEB Journal</i> , <b>2011</b> , 25, 1002.4	0.9	
27	Robust dynamic balance of AP-1 transcription factors in a neuronal gene regulatory network. <i>BMC Systems Biology</i> , <b>2010</b> , 4, 171	3.5	14
26	Time series analysis of transcriptional regulation of NF- $\kappa$ B targeted genes in vivo during the onset of liver regeneration. <i>FASEB Journal</i> , <b>2010</b> , 24, 749.6	0.9	
25	Structural properties of gene regulatory networks: definitions and connections. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , <b>2009</b> , 6, 158-70	3	6
24	Temporal and functional profile of the transcriptional regulatory network in the early regenerative response to partial hepatectomy in the rat. <i>BMC Genomics</i> , <b>2008</b> , 9, 527	4.5	23
23	Dynamic transcriptomic response to acute hypertension in the nucleus tractus solitarius. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , <b>2008</b> , 295, R15-27	3.2	10
22	Transcriptional regulatory network analysis during epithelial-mesenchymal transformation of retinal pigment epithelium. <i>Molecular Vision</i> , <b>2008</b> , 14, 1414-28	2.3	21
21	Multi-scale modeling of neuronal adaptation mediated by angiotensin II in the central regulation of blood pressure. <i>FASEB Journal</i> , <b>2008</b> , 22, 756.2	0.9	

20	Bladder inflammatory transcriptome in response to tachykinins: neurokinin 1 receptor-dependent genes and transcription regulatory elements. <i>BMC Urology</i> , <b>2007</b> , 7, 7	2.2	15
19	Integrated signaling and electrophysiological model of angiotensin II induced neuronal adaptation in the brain. <i>FASEB Journal</i> , <b>2007</b> , 21, A1352	0.9	
18	Analysis of transcriptional regulation underlying central neural control mechanisms in acute hypertension. <i>FASEB Journal</i> , <b>2007</b> , 21, A465	0.9	
17	From promoter analysis to transcriptional regulatory network prediction using PAINT. <i>Methods in Molecular Biology</i> , <b>2007</b> , 408, 49-68	1.4	19
16	Systems analysis of circadian time-dependent neuronal epidermal growth factor receptor signaling. <i>Genome Biology</i> , <b>2006</b> , 7, R48	18.3	10
15	The inflammatory and normal transcriptome of mouse bladder detrusor and mucosa. <i>BMC Physiology</i> , <b>2006</b> , 6, 1	0	17
14	Epidermal growth factor receptor-induced circadian-time-dependent gene regulation in suprachiasmatic nucleus. <i>NeuroReport</i> , <b>2006</b> , 17, 1437-41	1.7	8
13	Chronic alcohol exposure alters transcription broadly in a key integrative brain nucleus for homeostasis: the nucleus tractus solitarius. <i>Physiological Genomics</i> , <b>2005</b> , 24, 45-58	3.6	24
12	Unconventional systems analysis problems in molecular biology: a case study in gene regulatory network modeling. <i>Computers and Chemical Engineering</i> , <b>2005</b> , 29, 547-563	4	11
11	Transcriptome Analysis of Human Hematopoietic Progenitor Cells during In Vitro Erythroid Differentiation.. <i>Blood</i> , <b>2005</b> , 106, 1750-1750	2.2	
10	Erythroid-induced commitment of K562 cells results in clusters of differentially expressed genes enriched for specific transcription regulatory elements. <i>Physiological Genomics</i> , <b>2004</b> , 19, 117-30	3.6	40
9	Structural analysis of large-scale systems for distributed state estimation and control applications. <i>Control Engineering Practice</i> , <b>2003</b> , 11, 895-905	3.9	27
8	A distributed state estimation and control algorithm for plantwide processes. <i>IEEE Transactions on Control Systems Technology</i> , <b>2003</b> , 11, 119-127	4.8	61
7	PAINT: a promoter analysis and interaction network generation tool for gene regulatory network identification. <i>OMICS A Journal of Integrative Biology</i> , <b>2003</b> , 7, 235-52	3.8	112
6	Continuous-time identification of gene expression models. <i>OMICS A Journal of Integrative Biology</i> , <b>2003</b> , 7, 373-86	3.8	13
5	Analysis and neuronal modeling of the nonlinear characteristics of a local cardiac reflex in the rat. <i>Neural Computation</i> , <b>2001</b> , 13, 2239-71	2.9	3
4	Robust Control of a Multivariable Experimental Four-Tank System. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2001</b> , 40, 1916-1927	3.9	47
3	A spatially-tracked single cell transcriptomics map of neuronal networks in the intrinsic cardiac nervous system		1

2 3D single cell scale anatomical map of sex-dependent variability of the rat intrinsic cardiac nervous system 2

1 Innervation and Neuronal Control of the Mammalian Sinoatrial Node: A Comprehensive Atlas 1