James S Schwaber

List of Publications by Year
in descending order

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124 papers	5,226 citations	117625 34 h-index	95266 68 g-index
133 all docs	133 docs citations	133 times ranked	3413 citing authors

#	Article	IF	Citations
1	Selective and nonselective stimulation of central cholinergic and dopaminergic development in vitro by nerve growth factor, basic fibroblast growth factor, epidermal growth factor, insulin and the insulin-like growth factors I and II. Journal of Neuroscience, 1990, 10, 558-570.	3.6	534
2	Amygdaloid and basal forebrain direct connections with the nucleus of the solitary tract and the dorsal motor nucleus. Journal of Neuroscience, 1982, 2, 1424-1438.	3.6	425
3	Neurotropic properties of pseudorabies virus: uptake and transneuronal passage in the rat central nervous system. Journal of Neuroscience, 1990, 10, 1974-1994.	3.6	383
4	Ultrastructural demonstration of a gastric monosynaptic vagal circuit in the nucleus of the solitary tract in rat. Journal of Neuroscience, 1989, 9, 1985-1996.	3.6	251
5	Central neuronal circuit innervating the rat heart defined by transneuronal transport of pseudorabies virus. Journal of Neuroscience, 1995, 15, 1998-2012.	3.6	168
6	Innervation of the heart and its central medullary origin defined by viral tracing. Science, 1994, 263, 232-234.	12.6	159
7	The origin and extent of direct amygdala projections to the region of the dorsal motor nucleus of the vagus and the nucleus of the solitary tract. Neuroscience Letters, 1980, 20, 15-20.	2.1	146
8	Importance of Input Perturbations and Stochastic Gene Expression in the Reverse Engineering of Genetic Regulatory Networks: Insights From an Identifiability Analysis of an In Silico Network. Genome Research, 2003, 13, 2396-2405.	5.5	145
9	Neurons containing calcitonin gene-related peptide in the parabrachial nucleus project to the central nucleus of the amygdala. Journal of Comparative Neurology, 1988, 270, 416-426.	1.6	124
10	Modeling Neural Mechanisms for Genesis of Respiratory Rhythm and Pattern. II. Network Models of the Central Respiratory Pattern Generator. Journal of Neurophysiology, 1997, 77, 2007-2026.	1.8	120
11	PAINT: A Promoter Analysis and Interaction Network Generation Tool for Gene Regulatory Network Identification. OMICS A Journal of Integrative Biology, 2003, 7, 235-252.	2.0	119
12	Significance of conductances in Hodgkin-Huxley models. Journal of Neurophysiology, 1993, 70, 2502-2518.	1.8	118
13	Distribution and organization of cholinergic neurons in the rat forebrain demonstrated by computer-aided data acquisition and three-dimensional reconstruction. Journal of Comparative Neurology, 1987, 263, 309-325.	1.6	112
14	Vagal afferent innervation of the atria of the rat heart reconstructed with confocal microscopy. , 1997, 381, 1-17.		110
15	Projections of the dorsal motor nucleus of the vagus to cardiac ganglia of rat atria: An anterograde tracing study. , 1999, 410, 320-341.		104
16	Distribution of neurotensin-immunoreactivity within baroreceptive portions of the nucleus of the tractus solitarius and the dorsal vagal nucleus of the rat. Journal of Comparative Neurology, 1984, 226, 155-164.	1.6	88
17	Modeling Neural Mechanisms for Genesis of Respiratory Rhythm and Pattern. I. Models of Respiratory Neurons. Journal of Neurophysiology, 1997, 77, 1994-2006.	1.8	85
18	A dynamic neural network approach to nonlinear process modeling. Computers and Chemical Engineering, 1997, 21, 371-385.	3.8	78

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19	A laser confocal microscopic study of vagal afferent innervation of rat aortic arch: Chemoreceptors as well as baroreceptors. Journal of the Autonomic Nervous System, 1997, 67, 1-14.	1.9	77
20	Somatostatinergic projections from the central nucleus of the amygdala to the vagal nuclei. Peptides, 1983, 4, 657-662.	2.4	75
21	Scattered-Light Imaging in Vivo Tracks Fast and Slow Processes of Neurophysiological Activation. NeuroImage, 2001, 14, 977-994.	4.2	73
22	The organization of insular cortex projections to the amygdaloid central nucleus and autonomic regulatory nuclei of the dorsal medulla. Brain Research, 1985, 360, 355-360.	2.2	72
23	Temporal changes in innate immune signals in a rat model of alcohol withdrawal in emotional and cardiorespiratory homeostatic nuclei. Journal of Neuroinflammation, 2012, 9, 97.	7.2	69
24	Single-Cell Transcriptional Analysis Reveals Novel Neuronal Phenotypes and Interaction Networks Involved in the Central Circadian Clock. Frontiers in Neuroscience, 2016, 10, 481.	2.8	64
25	Innervation and Neuronal Control of the Mammalian Sinoatrial Node a Comprehensive Atlas. Circulation Research, 2021, 128, 1279-1296.	4.5	64
26	Frontal cortex projections to the amygdaloid central nucleus in the rabbit. Neuroscience, 1985, 15, 327-346.	2.3	63
27	The role of the gutâ€“brain axis in alcohol use disorders. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2016, 65, 234-241.	4.8	61
28	Characteristic firing behavior of cell types in the cardiorespiratory region of the nucleus tractus solitarii of the rat. Brain Research, 1993, 604, 112-125.	2.2	56
29	Amygdaloid influences on brainâ€stem neurones in the rabbit.. Journal of Physiology, 1986, 381, 135-148.	2.9	50
30	Habituating control strategies for process control. AICHE Journal, 1995, 41, 604-618.	3.6	50
31	Tonically rhythmic neurons within a cardiorespiratory region of the nucleus tractus solitarii of the rat. Journal of Neurophysiology, 1991, 66, 824-838.	1.8	48
32	Inputs drive cell phenotype variability. Genome Research, 2014, 24, 930-941.	5.5	46
33	Dendritic morphology of cardiac related medullary neurons defined by circuit-specific infection by a recombinant pseudorabies virus expressing Î²-galactosidase. Journal of NeuroVirology, 1995, 1, 359-368.	2.1	43
34	Single-Cell Glia and Neuron Gene Expression in the Central Amygdala in Opioid Withdrawal Suggests Inflammation With Correlated Gut Dysbiosis. Frontiers in Neuroscience, 2019, 13, 665.	2.8	43
35	Simultaneous encoding of carotid sinus pressure and dP/dt by NTS target neurons of myelinated baroreceptors. Journal of Neurophysiology, 1996, 76, 2644-2660.	1.8	40
36	A Comprehensive Integrated Anatomical and Molecular Atlas of Rat Intrinsic Cardiac Nervous System. IScience, 2020, 23, 101140.	4.1	40

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37	Coordinated Dynamic Gene Expression Changes in the Central Nucleus of the Amygdala During Alcohol Withdrawal. Alcoholism: Clinical and Experimental Research, 2013, 37, E88-100.	2.4	38
38	Chronic alcohol exposure alters transcription broadly in a key integrative brain nucleus for homeostasis: the nucleus tractus solitarius. Physiological Genomics, 2006, 24, 45-58.	2.3	35
39	Multiscale modeling in the clinic: diseases of the brain and nervous system. Brain Informatics, 2017, 4, 219-230.	3.0	33
40	Electrophysiological and electron microscopic analysis of the vagus nerve of the pigeon, with particular reference to the cardiac innervation. Brain Research, 1978, 147, 65-78.	2.2	32
41	Modeling Neural Mechanisms for Genesis of Respiratory Rhythm and Pattern. III. Comparison of Model Performances During Afferent Nerve Stimulation. Journal of Neurophysiology, 1997, 77, 2027-2039.	1.8	32
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. Alcoholism: Clinical and Experimental Research, 2012, 36, 1688-1700.	2.4	32
43	Field potential and single unit analyses of the avian dorsal motor nucleus of the vagus and criteria for identifying vagal cardiac cells of origin. Brain Research, 1978, 147, 79-90.	2.2	29
44	Selective autonomic blockade of conditioned and unconditioned heart rate changes in rabbits. Pharmacology Biochemistry and Behavior, 1974, 2, 493-501.	2.9	28
45	The organization of dorsal medullary projections to the central amygdaloid nucleus and parabrachial nuclei in the rabbit. Neuroscience, 1989, 30, 717-732.	2.3	28
46	Dynamic gain scheduled process control. Chemical Engineering Science, 1998, 53, 2675-2690.	3.8	25
47	Quantitation of cellular resolution in situ hybridization histochemistry in brain by image analysis. Neuroscience Letters, 1987, 82, 315-320.	2.1	24
48	A parallel control strategy abstracted from the baroreceptor reflex. Chemical Engineering Science, 1996, 51, 931-945.	3.8	23
49	Modeling the VPAC2-Activated cAMP/PKA Signaling Pathway: From Receptor to Circadian Clock Gene Induction. Biophysical Journal, 2006, 90, 1560-1571.	0.5	23
50	MicroRNA network changes in the brain stem underlie the development of hypertension. Physiological Genomics, 2015, 47, 388-399.	2.3	23
51	From Promoter Analysis to Transcriptional Regulatory Network Prediction Using PAINT. Methods in Molecular Biology, 2007, 408, 49-68.	0.9	22
52	The ventrolateral medulla as a source of synaptic drive to rhythmically firing neurons in the cardiovascular nucleus tractus solitarius of the rat. Brain Research, 1991, 561, 217-229.	2.2	21
53	Response Properties of Baroreceptive NTS Neurons. Annals of the New York Academy of Sciences, 2001, 940, 157-168.	3.8	21
54	Quantitative Evaluation of Clustering Results Using Computational Negative Controls. , 2004, , .		20

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55	Computational modeling of cytokine signaling in microglia. Molecular BioSystems, 2015, 11, 3332-3346.	2.9	20
56	Computational modeling of neuronal dynamics for systems analysis: application to neurons of the cardiorespiratory NTS in the rat. Brain Research, 1993, 604, 126-141.	2.2	19
57	Identifying functional gene regulatory network phenotypes underlying single cell transcriptional variability. Progress in Biophysics and Molecular Biology, 2015, 117, 87-98.	2.9	19
58	Use of a digital brain atlas to compare the distribution of NGF- and bFGF-protected cholinergic neurons. Journal of Comparative Neurology, 1991, 309, 27-39.	1.6	17
59	Neuroanatomical Substrates of Cardiovascular and Emotional â€" Autonomic Regulation. , 1986, , 353-384.		17
60	Continuous-Time Identification of Gene Expression Models. OMICS A Journal of Integrative Biology, 2003, 7, 373-386.	2.0	15
61	Dynamic transcriptomic response to acute hypertension in the nucleus tractus solitarius. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2008, 295, R15-R27.	1.8	15
62	Robust dynamic balance of AP-1 transcription factors in a neuronal gene regulatory network. BMC Systems Biology, 2010, 4, 171.	3.0	15
63	Systemic leukotriene B₄ receptor antagonism lowers arterial blood pressure and improves autonomic function in the spontaneously hypertensive rat. Journal of Physiology, 2016, 594, 5975-5989.	2.9	15
64	Integrative Gene Regulatory Network Analysis Reveals Light-Induced Regional Gene Expression Phase Shift Programs in the Mouse Suprachiasmatic Nucleus. PLoS ONE, 2012, 7, e37833.	2.5	15
65	Unconventional systems analysis problems in molecular biology: a case study in gene regulatory network modeling. Computers and Chemical Engineering, 2005, 29, 547-563.	3.8	14
66	Epidermal growth factor receptor induced Erk phosphorylation in the suprachiasmatic nucleus. Brain Research, 2006, 1088, 45-48.	2.2	14
67	The Baroreceptor Reflex: A Biological Control System with Applications in Chemical Process Control. Industrial & Engineering Chemistry Research, 1994, 33, 2453-2466.	3.7	13
68	Fas-Mediated Apoptosis Eliminates B Cells That Acquire Self-Reactivity during the Germinal Center Response to NP. Cellular Immunology, 2000, 203, 103-110.	3.0	13
69	Information Theoretic Analysis of Pulmonary Stretch Receptor Spike Trains. Journal of Neurophysiology, 2001, 85, 448-461.	1.8	13
70	Intracellular Information Processing through Encoding and Decoding of Dynamic Signaling Features. PLoS Computational Biology, 2015, 11, e1004563.	3.2	13
71	Similarities in alcohol and opioid withdrawal syndromes suggest common negative reinforcement mechanisms involving the interoceptive antireward pathway. Neuroscience and Biobehavioral Reviews, 2021, 125, 355-364.	6.1	13
72	A single cell transcriptomics map of paracrine networks in the intrinsic cardiac nervous system. IScience, 2021, 24, 102713.	4.1	13

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73	Investigating the Effects of Brainstem Neuronal Adaptation on Cardiovascular Homeostasis. Frontiers in Neuroscience, 2020, 14, 470.	2.8	11
74	Computational modeling of the baroreflex arc: nucleus tractus solitarius. Brain Research Bulletin, 2000, 51, 139-150.	3.0	10
75	Systems analysis of circadian time-dependent neuronal epidermal growth factor receptor signaling. Genome Biology, 2006, 7, R48.	9.6	10
76	Epidermal growth factor receptor-induced circadian-time-dependent gene regulation in suprachiasmatic nucleus. NeuroReport, 2006, 17, 1437-1441.	1.2	10
77	Quantitation and digital representation of in situ hybridization histochemistry. Methods in Enzymology, 1989, 168, 808-821.	1.0	9
78	A digital brain atlas and its application to the visceral neuraxis. Journal of Neuroscience Methods, 1994, 54, 253-260.	2.5	8
79	Development and Implementation of a High-Performance Sensor System for an Industrial Polymer Reactor. Industrial & Engineering Chemistry Research, 2005, 44, 2606-2620.	3.7	8
80	A universal reference sample derived from clone vector for improved detection of differential gene expression. BMC Genomics, 2006, 7, 109.	2.8	8
81	A fast carrier chromatin immunoprecipitation method applicable to microdissected tissue samples. Journal of Neuroscience Methods, 2008, 172, 38-42.	2.5	8
82	A data-driven modeling approach to identify disease-specific multi-organ networks driving physiological dysregulation. PLoS Computational Biology, 2017, 13, e1005627.	3.2	8
83	Computer-aided mapping of brain tissue. Applied Optics, 1987, 26, 3384.	2.1	7
84	Analysis and Neuronal Modeling of the Nonlinear Characteristics of a Local Cardiac Reflex in the Rat. Neural Computation, 2001, 13, 2239-2271.	2.2	6
85	Multiscale Model of Dynamic Neuromodulation Integrating Neuropeptide-Induced Signaling Pathway Activity with Membrane Electrophysiology. Biophysical Journal, 2015, 108, 211-223.	0.5	6
86	3D single cell scale anatomical map of sex-dependent variability of the rat intrinsic cardiac nervous system. IScience, 2021, 24, 102795.	4.1	6
87	In Situ Hybridization Combined with Retrograde Fluorescent Tract Tracing. , 1989, , 265-297.		6
88	Conceptualization of a Parasympathetic Endocrine System. Frontiers in Neuroscience, 2019, 13, 1008.	2.8	5
89	Combining Laser Capture Microdissection and Microfluidic qPCR to Analyze Transcriptional Profiles of Single Cells: A Systems Biology Approach to Opioid Dependence. Journal of Visualized Experiments, 2020, , .	0.3	5
90	What is it to be Conscious?. , 2014, , 353-363.		4

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91	Neuronal Modeling of the Baroreceptor Reflex with Applications in Process Modeling and Control. , 1997, , 87-127.		4
92	Neurogenesis of the Respiratory Pattern: Insights from Computational Modeling. Advances in Experimental Medicine and Biology, 2001, 499, 165-170.	1.6	3
93	Adaptive transcriptional dynamics of A2 neurons and central cardiovascular control pathways. Experimental Physiology, 2012, 97, 462-468.	2.0	3
94	In situ hybridization histochemistry combined with markers of neuronal connectivity. Methods in Enzymology, 1989, 168, 778-791.	1.0	2
95	A Neuro-Mimetic Dynamic Scheduling Algorithm for Control: Analysis and Applications. Neural Computation, 1997, 9, 479-502.	2.2	2
96	Input-output signal processing plasticity of vagal motor neurons in response to cardiac ischemic injury. IScience, 2021, 24, 102143.	4.1	2
97	Diurnal Patterns of Gene Expression in the Dorsal Vagal Complex and the Central Nucleus of the Amygdala â€“ Non-rhythm-generating Brain Regions. Frontiers in Neuroscience, 2020, 14, 375.	2.8	1
98	Behavioral and neurobiological changes within a period of heightened susceptibility to voluntary alcohol withdrawal. FASEB Journal, 2008, 22, 946.7.	0.5	1
99	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. Frontiers in Systems Neuroscience, 2021, 15, 739790.	2.5	1
100	Biophysical Models of Minipig Right Atrial Ganglionic Plexus Principal Neurons Identified from Transcriptomics Data. FASEB Journal, 2022, 36, .	0.5	1
101	Transcriptional regulation network analysis of the hypertension-perturbed nucleus tractus solitarius. BMC Neuroscience, 2008, 9, .	1.9	0
102	Multi-scale modeling of angiotensin II induced neuronal regulatory mechanisms in the brain. BMC Neuroscience, 2008, 9, .	1.9	0
103	The neuroscienceâ€“systems biology disconnect: towards the NeuroPhysiome. Experimental Physiology, 2012, 97, 452-454.	2.0	0
104	Dynamic Transcriptomics: Transcriptomic Discovery of a Biological Multiple-Input Multiple-Output Heart Control Mechanism. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 1-5.	0.4	0
105	Systemic Immune Bias Delineates Malignant Astrocytoma Survival Cohorts. Journal of Immunology, 2021, 206, 1483-1492.	0.8	0
106	Mapping the little brain at the heart by an interdisciplinary systems biology team. IScience, 2021, 24, 102433.	4.1	0
107	Integrated signaling and electrophysiological model of angiotensin II induced neuronal adaptation in the brain. FASEB Journal, 2007, 21, A1352.	0.5	0
108	Analysis of transcriptional regulation underlying central neural control mechanisms in acute hypertension. FASEB Journal, 2007, 21, A465.	0.5	0

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109	Multiâ€scale modeling of neuronal adaptation mediated by angiotensin II in the central regulation of blood pressure. FASEB Journal, 2008, 22, 756.2.	0.5	0
110	Sustained hypertensionâ€induced dynamic transcriptional regulation in the nucleus tractus solitarius. FASEB Journal, 2008, 22, .	0.5	0
111	Adaptive Single Neuron Hypertensive Gene Expression Programs in the Nucleus Tractus Solitarius. FASEB Journal, 2012, 26, 1035.19.	0.5	0
112	Quantitation and Digital Representation of in Situ Hybridization Histochemistry. , 1989, , 147-160.		0
113	Neuronal Model Predicts Reponses of the Rat Baroreflex. , 1993, , 89-96.		0
114	Modeling and analysis of some neural mechanisms for the genesis and control of respiratory pattern. Lecture Notes in Computer Science, 1995, , 100-107.	1.3	0
115	Dynamic Regulation of microRNA Networks in the Brainstem Characterize Hypertension Development. FASEB Journal, 2015, 29, 984.12.	0.5	0
116	Computational Modeling of a Cytokine Interaction Network in Microglia. FASEB Journal, 2015, 29, 613.8.	0.5	0
117	Single Cell Gene Expression Analysis and 3â€D Mapping of Cardiac Ganglia. FASEB Journal, 2018, 32, 863.6.	0.5	0
118	Investigating Singleâ€cell Transcriptome Dynamics of the Dorsal Motor Nucleus of the Vagus (DMV) in a Rat Model of Remote Ischemicâ€Reperfusion Cardioprotection (RIPC). FASEB Journal, 2019, 33, 742.3.	0.5	0
119	Intrinsic Cardiac Ganglionic Neurons Projecting to the SA node in the Rat and Pig Hearts: Retrograde Labeling and Neurolucida 3â€D Reconstruction. FASEB Journal, 2019, 33, 773.2.	0.5	0
120	A Comprehensive Integrated Anatomical and Molecular Atlas of Rodent Intrinsic Cardiac Nervous System. SSRN Electronic Journal, 0, , .	0.4	0
121	Systemsâ€level Multiâ€organ Modeling of Transcriptomic Data to Reveal Sexâ€specific Shifts in Regulatory Control During the Development of Hypertension. FASEB Journal, 2022, 36, .	0.5	0
122	Anatomical and Molecular Phenotypes of Fast and Slow Vagal Targets in the Intrinsic Cardiac Nervous System. FASEB Journal, 2022, 36, .	0.5	0
123	Modeling and Analysis of Closedâ€Loop Control of the Cardiovascular System. FASEB Journal, 2022, 36, .	0.5	0
124	A 3D Anatomical and Molecular Map of Cardiac Vagal Motoneurons. FASEB Journal, 2022, 36, .	0.5	0