

Highly Cited Information in Neuroscience

ISI is recognized as a leading publisher of research information that can supply useful measures of the impact and strength of published research. Our unique strength is derived from capturing and processing the references published by the scholarly community. We create a wide spectrum of products, most notably *Current Contents Connect*[®] and the *Web of Science*[®]. In these handouts, we present several unique views of the literature in the area of neuroscience.

Such analyses begin with a proper understanding of the scope of the study and the data. Here are several helpful reminders to consider as we present our lists:

- Most of the information contained in this document comes from the “High Impact Papers” database which contains – for each subject category – data on the 200 most cited papers in each year of a given time period. The time period used for these analyses is 1989-1998, with citation counts through early 1999. Using data across multiple years helps to identify the emergence of highly influential research.
- The data reflect a subset of journals covered in the ISI database under the classification “Neuroscience and Behavior” which are listed on pages 2-3 of this package. Except for articles found in the multidisciplinary journals *Science*, *Nature*, and *Proceedings of the National Academy of Sciences USA*, the rankings of articles from publications outside the “Neurosciences and Behavior” group are not considered in these studies.
- This document includes the following "High Impact" lists:
 - The top 25 journals.
 - The top 25 countries.
 - The top 25 organizations.
 - The top 40 authors.
 - The top 25 papers (overall).
 - The top 25 papers (published in *Journal of Neuroscience*).
- In addition to the "High Impact" papers, we include a list of "Hot" papers in Neuroscience -- recent research reports (published within the last two years) that have attracted significantly more attention in a given two month period than other papers of the same type and age. These highly cited studies generally communicate important findings that have been quickly utilized by the scientific community. Such keen interest on the part of scientists may be the mark of an area of investigation that is beginning to gain momentum. This list was taken from the November-December 2000 edition of *ScienceWatch® Hot Papers Database*, which utilized ISI citation data for the period July-August 2000.
- Lastly, we must note that the use of cited reference data is but one measure of performance and research impact. Other factors and indicators are also important for consideration and evaluation of scientific research within the process of scholarly communication.

Please visit our Website at <http://www.isinet.com> and click on “What’s Hot in Research” for updates into the current research environment.



Source Publications in Neurosciences

ACTA NEUROBIOLOGIAE EXPERIMENTALIS
ACTA NEUROLOGICA SCANDINAVICA
ACTA NEUROPATHOLOGICA
ACTA PSYCHIATRICA SCANDINAVICA
ADDICTION BIOLOGY
AGGRESSIVE BEHAVIOR
ALCOHOL
ALCOHOL & ALCOHOLISM
ALCOHOLISM-CLIN & EXPERIM. RESEARCH
ALZHEIMER DISEASE & ASSOCIATED DISORDERS
AMERICAN JOURNAL OF NEURORADIOLOGY
AMERICAN JOURNAL OF PSYCHIATRY
ANIMAL BEHAVIOUR
ANIMAL LEARNING & BEHAVIOR
ANNALS OF NEUROLOGY
ANNUAL REVIEW OF NEUROSCIENCE
ANNUAL REVIEW OF PSYCHOLOGY
APPETITE
ARCHIVES OF GENERAL PSYCHIATRY
ARCHIVES ITALIENNES DE BIOLOGIE
ARCHIVES OF NEUROLOGY
AUTONOMIC NEUROSCIENCE-BASIC & CLINICAL
BEHAVIOURAL BRAIN RESEARCH
BEHAVIORAL & BRAIN SCIENCES
BEHAVIORAL ECOLOGY
BEHAVIOR GENETICS
BEHAVIORAL NEUROSCIENCE
BEHAVIOURAL PHARMACOLOGY
BEHAVIOUR
BIOLOGICAL CYBERNETICS
BIOLOGICAL PSYCHIATRY
BRAIN
BRAIN BEHAVIOR & EVOLUTION
BRAIN BEHAVIOR & IMMUNITY
BRAIN & COGNITION
BRAIN & DEVELOPMENT
BRAIN & LANGUAGE
BRAIN PATHOLOGY
BRAIN RESEARCH
BRAIN RESEARCH BULLETIN
BRAIN RESEARCH REVIEWS
BRAIN TOPOGRAPHY
BRITISH JOURNAL OF PSYCHIATRY
CANADIAN JOURNAL OF NEUROLOGICAL SCI.
CELLULAR & MOLECULAR NEUROBIOLOGY
CEPHALALGIA
CEREBRAL CORTEX
CEREBROVASCULAR DISEASES
CHEMICAL SENSES
CLINICAL NEUROPHARMACOLOGY
CLINICAL NEUROPHYSIOLOGY
CNS DRUGS
COGNITIVE BRAIN RESEARCH
CORTEX
CRITICAL REVIEWS IN NEUROBIOLOGY
CURRENT OPINION IN NEUROBIOLOGY
DEMENTIA & GERIATRIC COGNITIVE DISORDERS
DEVELOPMENTAL BRAIN RESEARCH
DEVELOPMENTAL MEDICINE & CHILD NEUROL
DEVELOPMENTAL NEUROSCIENCE
DEVELOPMENTAL PSYCHOBIOLOGY
DRUG & ALCOHOL DEPENDENCE
EPILEPSIA
EPILEPSY RESEARCH
ETHOLOGY
EUR ARCHIVES OF PSYCHIATRY & CLIN NEUROSCI
EUROPEAN JOURNAL OF NEUROSCIENCE
EUROPEAN NEUROLOGY
EUROPEAN NEUROPSYCHOPHARMACOLOGY
EXPERIMENTAL AGING RESEARCH
EXPERIMENTAL BRAIN RESEARCH
EXPERIMENTAL NEUROLOGY
FRONTIERS IN NEUROENDOCRINOLOGY
GLIA
HIPPOCAMPUS
HORMONES & BEHAVIOR
HUMAN BRAIN MAPPING
HUMAN PSYCHOPHARMACOLOGY-CLIN & EXP
INTL CLINICAL PSYCHOPHARMACOLOGY
INTL J OF DEVELOPMENTAL NEUROSCIENCE
INTL J OF PSYCHOPHYSIOLOGY
J OF AFFECTIVE DISORDERS
J OF AUTONOMIC PHARMACOLOGY
J OF CEREBRAL BLOOD FLOW & METABOLISM
J OF CHEMICAL NEUROANATOMY
J OF CHILD NEUROLOGY
J OF CLINICAL PSYCHOPHARMACOLOGY
J OF COGNITIVE NEUROSCIENCE
J OF COMPARATIVE NEUROLOGY
J OF COMPARATIVE PSYCHOLOGY
J OF COMPUTATIONAL NEUROSCIENCE
J OF THE EXPERIMENTAL ANALYSIS OF BEHAVIOR
J OF EXP PSYCHOL-ANIMAL BEHAVIOR PROCESSES
J OF INTELLECTUAL DISABILITY RESEARCH
J OF MOLECULAR NEUROSCIENCE
J OF NERVOUS & MENTAL DISEASE
J OF NEURAL TRANSMISSION
J OF NEURAL TRANSMISSION-SUPPLEMENT
J OF NEUROBIOLOGY
J OF NEUROCHEMISTRY
J OF NEUROCYTOLOGY
J OF NEUROENDOCRINOLOGY
J OF NEUROGENETICS
J OF NEUROIMMUNOLOGY
J OF NEUROLOGY
J OF NEUROLOGY NEUROSURGERY & PSYCHIATRY
J OF THE NEUROLOGICAL SCIENCES
J OF NEUROPATHOLOGY & EXP NEUROLOGY
J OF NEUROPHYSIOLOGY
J OF NEUROSCIENCE
J OF NEUROSCIENCE METHODS
J OF NEUROSCIENCE RESEARCH
J OF NEUROSURGERY
J OF NEUROTRAUMA
J OF NEUROVIROLOGY
J OF PAIN & SYMPTOM MANAGEMENT

Source Publications in Neurosciences

J OF THE PERIPHERAL NERVOUS SYSTEM
J OF PHYSIOLOGY-PARIS
J OF PSYCHIATRIC RESEARCH
J OF PSYCHOPHARMACOLOGY
J OF SLEEP RESEARCH
LEARNING & MEMORY
METABOLIC BRAIN DISEASE
MOLECULAR BRAIN RESEARCH
MOLECULAR & CELLULAR NEUROSCIENCE
MOLECULAR NEUROBIOLOGY
MOLECULAR PSYCHIATRY
MOVEMENT DISORDERS
MULTIPLE SCLEROSIS
NATURE NEUROSCIENCE
NEURAL COMPUTATION
NEUROBIOLOGY OF AGING
NEUROBIOLOGY OF DISEASE
NEUROBIOLOGY OF LEARNING & MEMORY
NEUROCHEMISTRY INTERNATIONAL
NEUROCHEMICAL RESEARCH
NEUROENDOCRINOLOGY
NEUROEPIDEMIOLOGY
NEUROIMAGE
NEUROIMMUNOMODULATION
NEUROLOGICAL RESEARCH
NEUROLOGY
NEUROMUSCULAR DISORDERS
NEURON
NEUROPATHOLOGY & APPLIED NEUROBIOLOGY
NEUROPEDIATRICS
NEUROPEPTIDES
NEUROPHARMACOLOGY
NEUROPHYSIOLOGIE CLINIQUE-CLINICAL
NEUROPHYSIOLOGY
NEUROPSYCHOBIOLOGY
NEUROPSYCHOLOGIA
NEUROPSYCHOPHARMACOLOGY
NEURORADIOLOGY
NEUROREPORT
NEUROSCIENCE & BIOBEHAVIORAL REVIEWS
NEUROSCIENCE LETTERS
NEUROSCIENCE RESEARCH
NEUROSCIENCE RESEARCH COMMUNICATIONS
NEUROSCIENCE
NEUROSURGERY
NEUROTOXICOLOGY & TERATOLOGY
NEUROTOXICOLOGY
PAIN
PERSPECTIVES ON DEVELOPMENTAL NEUROBIOL
PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR
PHARMACOPSYCHIATRY
PHYSIOLOGY & BEHAVIOR
PROGR. IN NEURO-PSYCHOPHARM & BIOL
PSYCHIATRY
PROGRESS IN NEUROBIOLOGY
PSYCHIATRY RESEARCH
PSYCHIATRY RESEARCH-NEUROIMAGING
PSYCHOBIOLOGY
PSYCHOLOGICAL BULLETIN
PSYCHOLOGICAL MEDICINE
PSYCHOLOGICAL REVIEW
PSYCHONEUROENDOCRINOLOGY
PSYCHOPHARMACOLOGY
PSYCHOPHYSIOLOGY
PSYCHOSOMATIC MEDICINE
QUARTERLY JOURNAL OF EXPERIMENTAL
PSYCHOLOGY SECT B-COMPAR & PHYSIOL PSYCH
RESTORATIVE NEUROLOGY & NEUROSCIENCE
REVUE NEUROLOGIQUE
SCHIZOPHRENIA RESEARCH
SCHIZOPHRENIA BULLETIN
SLEEP
SOMATOSENSORY & MOTOR RESEARCH
SYNAPSE
TRENDS IN COGNITIVE SCIENCES
TRENDS IN NEUROSCIENCES

Top 25 Journals Publishing "High Impact" Papers in Neuroscience
(1989-1998, ranked by total citations)

Rank	Journal	Citations	Papers	Avg. Cites/Paper
*	Science	73,050	270	270.56
*	Nature	70,843	301	235.36
*	Proc. of the National Academy of Sciences USA	33,397	141	236.86
1	Neuron	65,515	292	224.37
2	Journal of Neuroscience	30,207	163	185.32
3	Trends in Neuroscience	29,985	125	239.88
4	Annual Review of Neuroscience	21,452	68	315.47
5	Archives of General Psychiatry	15,523	56	277.20
6	Annals of Neurology	12,717	60	211.95
7	Neurology	9,382	43	218.19
8	Journal of Neurochemistry	8,381	37	226.51
9	Neuroscience	8,218	29	283.38
10	Psychological Review	7,563	24	315.13
11	Psychological Bulletin	7,371	26	283.50
12	American Journal Psychiatry	6,301	30	210.03
13	Journal of Computational Neuroscience	5,689	23	247.35
14	Journal of Cerebral Blood Flow & Metabolism	5,047	19	265.63
15	Brain Research	4,193	14	299.50
16	Progress in Neurobiology	3,942	20	197.10
17	Brain Research Reviews	3,629	10	362.90
18	Journal of Neurosurgery	3,459	15	230.60
19	Brain	3,363	21	160.14
20	Pain	2,376	7	339.43
21	Current Opinion in Neurobiology	2,191	17	128.88
22	Neuropharmacology	2,019	8	252.38
23	Journal of Neuroscience Methods	1,936	5	387.20
24	Journal of Neurophysiology	1,840	8	230.00
25	Neuroscience Letters	1,776	7	253.71

* These are the three multidisciplinary journals for which articles are selectively analyzed for inclusion in the "High Impact Papers" database for the "Neuroscience and Behavior" category.

Top 25 Countries Publishing "High Impact" Papers in Neuroscience
 (1989-1998, ranked by total citations)

Rank	Country	Citations	Papers	Avg. Cites/Paper
1	United States	344,398	1,472	233.97
2	England	47,140	207	227.73
3	Germany	46,542	175	265.95
4	Canada	31,992	137	233.52
5	Japan	19,446	81	240.07
6	France	16,003	78	205.17
7	Sweden	14,537	56	259.59
8	Switzerland	9,507	51	186.41
9	Italy	8,332	43	193.77
10	Australia	4,146	22	188.45
11	Scotland	3,721	22	169.14
12	Israel	3,558	19	187.26
13	Denmark	3,370	12	280.83
14	Netherlands	3,144	15	209.60
15	Spain	3,029	21	144.24
16	Austria	2,631	14	187.93
17	Belgium	1,566	9	174.00
18	New Zealand	1,557	6	259.50
19	Hungary	1,280	7	182.86
20	Finland	1,195	5	239.00
21	Norway	1,138	5	227.60
22	Wales	509	2	254.50
23	Mexico	506	3	168.67
24	USSR	425	2	212.50
25	Peoples Republic of China	350	2	175.00

**Top 25 Organizations Publishing "High Impact" Papers in
Neuroscience**
(1989-1998, ranked by total citations)

Rank	Organization	Citations	Papers	Avg. Cites/Paper
1	Harvard University	37,174	150	247.83
2	Johns Hopkins University	25,754	99	260.14
3	University of London	20,564	90	228.49
4	University of California - San Francisco	18,864	86	219.35
5	Washington University	16,772	67	250.33
6	Yale University	16,405	76	215.86
7	Veterans Administration Medical Center	16,351	67	244.04
8	Stanford University	14,766	54	273.44
9	Massachusetts General Hospital	13,745	62	221.69
10	Max Planck Inst. Psychiatry	13,727	35	392.20
11	Columbia University	13,641	67	203.60
12	University of Heidelberg	12,177	35	347.91
13	Salk Institute Biological Studies	12,082	46	262.65
14	University of California – Los Angeles	11,444	49	233.55
15	NIMH	11,356	48	236.58
16	University of California - San Diego	11,132	52	214.08
17	University of Michigan	10,029	29	345.83
18	University of Texas	9,824	43	228.47
19	Karolinska Institute & Hospital	9,820	39	251.79
20	University of British Columbia	8,232	28	294.00
21	University of Washington	7,653	38	201.39
22	University of Toronto	7,596	32	237.38
23	Duke University	7,069	27	261.81
24	University of Pennsylvania	7,054	37	190.65
25	Cornell University	6,764	29	233.24

Top 40 Authors of "High Impact" Papers in Neuroscience

(1989-1998, ranked by total citations)

Rank	Author	Citations	Papers	Avg. Cites/Paper
1	SEEBURG PH	10,528	27	389.93
2	SNYDER SH	9,267	20	463.35
3	DAWSON TM	7,081	18	393.39
4	SAKMANN B	6,200	18	344.44
5	BARDE YA	5,593	12	466.08
6	THOENEN H	5,326	13	409.69
7	FRACKOWIACK RSJ	5,319	21	253.29
8	HEINEMANN S	5,097	10	509.70
9	NAKANISHI S	4,954	13	381.08
10	BREDT DS	4,662	6	777.00
11	MONYER H	4,586	11	416.91
12	LINDSAY RM	4,528	11	411.64
12	WISDEN W	4,528	11	411.64
14	MATTSON MP	4,308	23	187.30
15	GREENBERG ME	4,263	12	355.25
16	CURRAN T	4,027	10	402.70
17	HOLLMANN M	4,025	7	575.00
18	COLLINGRIDGE GL	4,012	10	401.20
19	MORGAN JI	3,885	8	485.63
20	LIPTON SA	3,840	10	384.00
21	YANCOPOULOS GD	3,819	10	381.90
22	KANDEL ER	3,732	16	233.25
23	BURNASHEV N	3,676	8	459.50
24	PERSSON H	3,658	11	332.55
25	CHOI DW	3,650	12	304.17
26	DAWSON VL	3,611	10	361.10
27	FRITH CD	3,399	15	226.60
28	ROSENTHAL A	3,368	11	306.18
29	PETERSEN SE	3,364	11	305.82
30	VINCENT SR	3,360	7	480.00
31	SHENG M	3,314	11	301.27
32	TSIEN RW	3,272	11	297.45
33	FRISTON KJ	3,222	10	322.20
34	BLISS TVP	3,187	3	1,062.33
35	SQUIRE LR	3,183	10	318.30
36	ERNFORS P	3,147	12	262.25
37	MALENKA RC	3,115	14	222.50
38	SINGER W	3,012	10	301.20
39	SELKOE DJ	3,003	11	273.00
40	SHIGEMOTO R	2,982	10	298.20

Top 25 "High Impact" Papers in Neuroscience

(1989-1998, ranked by total citations)

Rank	Citations	Paper
1	2,377	TVP Bliss, GL Collingridge. "A synaptic model of memory - Long-term potentiation in the hippocampus" <i>Nature</i> 361: (6407) 31-39 1993
2	1,444	JI Morgan, T Curran. "Stimulus transcription coupling in the nervous system: involvement of the inducible protooncogenes <i>fos</i> and <i>jun</i>" <i>Annual Review of Neuroscience</i> 14: 421-451 1991.
3	1,442	J Garthwaite. "Glutamate, nitric oxide and cell-cell signaling in the nervous system" <i>Trends in Neurosciences</i> 14 (2): 60-67 1991.
4	1,375	RC Kessler, KA Mcgonagle, SY Zhao, CB Nelson, M Hughes, S Eshleman, HU Wittchen, KS Kendler. "Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States - Results from the National Comorbidity Survey" <i>Archives of General Psychiatry</i> 51 (1): 8-19 1994
5	1,333	RW Oppenheim. "Cell death during development of the nervous system" <i>Annual Review of Neuroscience</i> 14: 453-501 1991
6	1,301	M Sheng, ME Greenberg. "The regulation and function of <i>c-fos</i> and other immediate early genes in the nervous system" <i>Neuron</i> 4: (4) 477-485 1990
7	1,283	S Nakanishi. "Molecular diversity of glutamate receptors and implications for brain function" <i>Science</i> 258 (5082): 597-603 1992
8	1,252	BT Hope, GJ Michael, KM Knigge, SR Vincent. "Neuronal NADPH diaphorase is a nitric oxide synthase" <i>Proc. of the National Academy of Sciences of the USA</i> 88 (7): 2811-2814 1991
9	1,207	M Hollmann, S Heinemann. "Cloned glutamate receptors" <i>Annual Review of Neuroscience</i> 17: 31-108 1994
10	1,199	TM Dawson, DS Bredt, M Fotuhi, PM Hwang, SH Snyder. "Nitric oxide synthase and neuronal NADPH diaphorase are identical in brain and peripheral tissues" <i>Proc. of the National Academy of Sciences of the USA</i> 88 (17): 7797-7801 1991
11	1,173	VL Dawson, TM Dawson, ED London, DS Bredt, SH Snyder. "Nitric oxide mediates glutamate neurotoxicity in primary cortical cultures" <i>Proc. of the National Academy of Sciences of the USA</i> 88 (14): 6368-6371 1991
12	1,073	DS Bredt, SH Snyder. "Nitric oxide, a novel neuronal messenger" <i>Neuron</i> 8 (1): 3-11 1992
12	1,073	H Monyer, R Sprengel, R Schoepfer, A Herb, M Higuchi, H Lomeli, N Burnashev, B Sakmann, PH Seeburg. "Heteromeric NMDA receptors - Molecular and functional

Top 25 "High Impact" Papers in Neuroscience

(1989-1998, ranked by total citations)

Rank	Citations	Paper
		distinction of subtypes " <i>Science</i> 256 (5060): 1217-1221 May 22 1992.
14	1,062	SA Lipton, YB Choi, ZH Pan, SZZ Lei, HSV Chen, NJ Sucher, J Loscalzo, DJ Singel, JS Stamler. "A redox based mechanism for the neuroprotective and neurodestructive effects of nitric oxide and related nitroso compounds" <i>Nature</i> 364 (6438): 626-632 Aug 12 1993.
15	1,061	YA Barde. "Trophic factors and neuronal survival" <i>Neuron</i> 2 (6): 1525-1534 Jun 1989.
16	1,035	AM Saunders, WJ Strittmatter, D Schmechel, PHS Georgehyslop, MA Pericakvance, SH Joo, BL Rosi, JF Gusella, DR Crappermaclachlan, MJ Alberts, C Hulette, B Crain, D Goldgaber, AD Roses. "Association of apolipoprotein E allele epsilon-4 with late onset familial and sporadic Alzheimers disease" <i>Neurology</i> 43 (8): 1467-1472 Aug 1993.
17	935	J Schlessinger, A Ullrich. "Growth factor signaling by receptor tyrosine kinases" <i>Neuron</i> 9 (3): 383-391 Sep 1992.
17	935	SR Vincent, H Kimura. "Histochemical mapping of nitric oxide synthase in the rat brain" <i>Neuroscience</i> 46 (4): 755-784 Feb 1992.
19	907	BA Yankner, LK Duffy, DA Kirschner. "Neurotrophic and neurotoxic effects of amyloid beta protein - Reversal by tachykinin neuropeptides" <i>Science</i> 250 (4978) 279-282 Oct 12 1990.
20	899	DW Choi, SM Rothman. "The role of glutamate neurotoxicity in hypoxic ischemic neuronal death" <i>Annual Review of Neuroscience</i> 13: 171-182 1990.
21	896	PM Bentler. "Comparative fit indexes in structural models" <i>Psychological Bulletin</i> 107 (2): 238-246 Mar 1990.
22	895	LR Squire. "Memory and the hippocampus - A synthesis from findings with rats, monkeys, and humans" <i>Psychological Review</i> 99 (2): 195-231 Apr 1992.
23	890	JT Coyle, P Puttfarcken . "Oxidative stress, glutamate, and neurodegenerative disorders" <i>Science</i> 262 (5134): 689-695 Oct 29 1993.
24	886	RL Albin, AB Young, JB Penney. "The functional anatomy of basal ganglia disorders" <i>Trends in Neurosciences</i> 12 (10): 366-375 Oct 1989.
25	877	K Keinanen, W Wisden, B Sommer, P Werner, A Herb, TA Verdoorn, B Sakmann, PH Seeburg. "A family of AMPA-selective glutamate receptors" <i>Science</i> 249 (4968): 556-560 Aug 3 1990.

Top 25 "High Impact" Papers from *Journal of Neuroscience*

(1989-1998, ranked by total citations)

Rank	Citations	Paper
1	632	W Wisden, DJ Laurie, H Monyer, PH Seeburg. "The distribution of 13 GABA(A) receptor subunit messenger RNAs in the rat brain. 1. Telencephalon, diencephalon, mesencephalon" <i>J Neurosci</i> 12 (3):1040-1062 1992
2	579	MP Mattson, B Cheng, D Davis, K Bryant, I Lieberburg, RE Rydel. "Beta amyloid peptides destabilize calcium homeostasis and render human cortical neurons vulnerable to excitotoxicity" <i>J Neurosci</i> 12 (2):376-389, 1992
3	543	VL Dawson, TM Dawson, DA Bartley, GR Uhl, SH Snyder. "Mechanisms of nitric oxide mediated neurotoxicity in primary brain cultures" <i>J Neurosci</i> 13(6):2651-2661 1993
4	506	CJ Pike, D Burdick, AJ Walencewicz, CG Glabe, CW Cotman. "Neurodegeneration induced by beta amyloid peptides invitro – The role of peptide assembly state" <i>J Neurosci</i> 13(4):1676-1687 1993
5	500	DW Choi. "Cerebral hypoxia – some new approaches and unanswered questions" <i>J Neurosci</i> 10(8):2493-2501 1990
6	448	M Corbetta, RM Miezin, S Dobmeyer, GL Shulman, SE Petersen. "Selective and divided attention during visual discriminations of shape, color, and speed – Functional anatomy by positron emission tomography" <i>J Neurosci</i> 11(8):2383-2402 1991
7	441	S Korsching. "The neurotrophic factor concept – a reexamination" <i>J Neurosci</i> 13(7):2739-2748 Jul 1993
8	418	Y Arakaway, M Sendtner, H Thoenen. "Survival effect of ciliary neurotrophic factor (CNTF) on chick embryonic motoneurons in culture – Comparison with other neurotrophic factors and cytokines" <i>J Neurosci</i> 10(11):3507-3515 1990
9	407	S Zeki, JDG Watson, CJ Lueck, KJ Friston, C Kennard, RSJ Frackowiak. "A direct demonstration of functional specialization in human visual cortex" <i>J Neurosci</i> 11(3):641-649 1991
10	396	A Buchan, WA Pulsinelli. "Hypothermia but not the N-methyl-D-aspartate antagonist, MK-801, attenuates neuronal damage in gerbils subjected to transient global ischemia" <i>J Neurosci</i> 10(1):311-316 1990
11	395	RS Petralia, N Yokotani, RJ Wenthold. "Light and electron microscope distribution of the NMDA receptor subunit NMDAR1 in the rat nervous system using a selective antipeptide antibody" <i>J Neurosci</i> 14(2):667-696 1994
12	394	TM Dawson, SH Snyder. "Gases as biological messengers – nitric oxide and carbon monoxide in the brain" <i>J Neurosci</i> 14(9):5147-5159 1994
13	375	MP Mattson, M Murrain, PB Guthrie, SB Kater. "Fibroblast growth factor and glutamate

Top 25 "High Impact" Papers from *Journal of Neuroscience*

(1989-1998, ranked by total citations)

Rank	Citations	Paper
		– Opposing roles in the generation and degeneration of hippocampal neuroarchitecture” <i>J Neurosci</i> 9(11):3728-3740 1989
13	375	P Seguela, J Wadiche, K DiNeley-Miller, JA Dani, JW Patrick. “Molecular cloning, functional properties, and distribution of rat brain alpha 7 – A nicotinic cation channel highly permeable to calcium” <i>J Neurosci</i> 13(2):596-604 1993
15	362	B Knusel, PP Michel, JS Schwaber, F Hefti. “Selective and nonselective stimulation of central cholinergic and dopaminergic development invitro by nerve growth factor, basic fibroblast growth factor, epidermal growth factor, insulin and the insulin-like growth factor-I and factor-II” <i>J Neurosci</i> 10(2):558-570 1990
16	346	RJ McKeon, RC Schreiber, JS Rudge, J Silver. “Reduction of neurite outgrowth in a model of glial scarring following CNS injury is correlated with the expression of inhibitory molecules on reactive astrocytes” <i>J Neurosci</i> 11(11):3398-3411 1991
17	345	Y Tanabe, A Nomura, M Masu, R Shigemoto, N Mizuno, S Nakanishi. “Signal transduction, pharmacological properties, and expression patterns of 2 rat metabotropic glutamate receptors, mGluR3 and mGluR4” <i>J Neurosci</i> 13(4):1372-1378 1993
18	339	M Corbetta, FM Miezin, GL Shulman, SE Petersen. “A pet study of visuospatial attention” <i>J Neuroscience</i> 13(3):1202-1226 1993
19	335	SB Kater, LR Mills. “Regulation of growth cone behavior by calcium” <i>J Neurosci</i> 11(4):891-899 1991
20	328	DJ Laurie, PH Seeburg, W Wisden. “The distribution of 13 GABA(A) receptor subunit messenger RNAs in the rat brain. 2. Olfactory bulb and cerebellum” <i>J Neurosci</i> 12(3):1063-1076 1992
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