

The Journal of Neuroscience

The Official Journal of
the Society for Neuroscience

September 1994
Volume 14 Number 9

- 5147 **Feature Article:** Gases as Biological Messengers: Nitric Oxide and Carbon Monoxide in the Brain
T.M. Dawson and S.H. Snyder
- 5160 Spatial and Temporal Expression Patterns of Two Sodium Channel Genes in *Drosophila*
C.-S. Hong and B. Ganetzky
- 5170 Physiological Correlates of the Precedence Effect and Summing Localization in the Inferior Colliculus of the Cat
T.C.T. Yin
- 5187 NGF and NT-3 Have Differing Effects on the Growth of Dorsal Root Axons in Developing Mammalian Spinal Cord
L. Zhang, R.E. Schmidt, Q. Yan, and W.D. Snider
- 5202 Cellular and Subcellular Localization of NMDA-R1 Subunit Immunoreactivity in the Visual Cortex of Adult and Neonatal Rats
C. Aoki, C. Venkatesan, C.-G. Go, J.A. Mong, and T.M. Dawson
- 5223 Differential Expression of Synaptic Vesicle Protein 2 (SV2) Isoforms
S.M. Bajjalieh, G.D. Frantz, J.M. Weimann, S.K. McConnell, and R.H. Scheller
- 5236 State-Dependent Release of Acetylcholine in Rat Thalamus Measured by *in vivo* Microdialysis
J.A. Williams, J. Comisarow, J. Day, H.C. Fibiger, and P.B. Reiner
- 5243 Three Novel Types of Voltage-Dependent Calcium Channels in Rat Cerebellar Neurons
L. Forti, A. Tottene, A. Moretti, and D. Pietrobon
- 5257 Target Dependence of Adult Neurons: Pattern of Terminal Arborizations
S. Marty, J.M. Weinitz, and M. Peschanski
- 5267 Receptive Fields and Dendritic Structure of Directionally Selective Retinal Ganglion Cells
G. Yang and R.H. Masland
- 5281 The Biological Responses of Axotomized Adult Motoneurons to Brain-derived Neurotrophic Factor
Q. Yan, C. Matheson, O.T. Lopez, and J.A. Miller
- 5292 Apoptotic Cell Death Induced by Optic Nerve Lesion in the Neonatal Rat
S.A. Rabacchi, L. Bonfanti, X.-H. Liu, and L. Maffei
- 5302 Switch in the Expression of Rat GABA_A-Receptor Subtypes during Postnatal Development: An Immunohistochemical Study
J.-M. Fritschy, J. Paysan, A. Enna, and H. Mohler

- 5325 Changes in Paired-Pulse Facilitation Suggest Presynaptic Involvement in Long-Term Potentiation
P.E. Schulz, E.P. Cook, and D. Johnston
- 5338 Nuclear-encoded Mitochondrial Precursor Protein: Intramitochondrial Delivery to Dendrites and Axon Terminals of Neurons and Regulation by Neuronal Activity
S. Liu and M. Wong-Riley
- 5352 Membrane Properties Underlying the Firing of Neurons in the Avian Cochlear Nucleus
A.D. Reyes, E.W. Rubel, and W.J. Spain
- 5365 Oligodendrocyte Precursor Quantitation and Localization in Perinatal Brain Using a Retrospective Bioassay
G.E. Gonye, A.E. Warrington, J.A. DeVito, and S.E. Pfeiffer
- 5373 Stress Exacerbates Neuron Loss and Cytoskeletal Pathology in the Hippocampus
B. Stein-Behrens, M.P. Mattson, I. Chang, M. Yeh, and R. Sapolsky
- 5381 Patterns of Brain Vasopressin Receptor Distribution Associated with Social Organization in Microtine Rodents
T.R. Insel, Z.-X. Wang, and C.F. Ferris
- 5393 Entrainment of the Fetal Hamster Circadian Pacemaker by Prenatal Injections of the Dopamine Agonist SKF 38393
N. Viswanathan, D.R. Weaver, S.M. Reppert, and F.C. Davis
- 5399 Expression of Neuron-Specific Tubulin Defines a Novel Population in the Proliferative Layers of the Developing Telencephalon
J.R.L. Menezes and M.B. Luskin
- 5417 Distinctive Patterns of GABA_A Receptor Subunit mRNAs in 13 Cell Lines
R.F. Tyndale, T.G. Hales, R.W. Olsen, and A.J. Tobin
- 5429 Few Cell Lines with GABA_A mRNAs Have Functional Receptors
T.G. Hales and R.F. Tyndale
- 5437 Gustatory, Olfactory, and Visual Convergence within the Primate Orbitofrontal Cortex
E.T. Rolls and L.L. Baylis
- 5453 Ethanol Directly Modulates Gating of a Dihydropyridine-Sensitive Ca²⁺ Channel in Neurohypophysial Terminals
X. Wang, G. Wang, J.R. Lemos, and S.N. Treistman
- 5461 Peptides Containing the RERMS Sequence of Amyloid β /A4 Protein Precursor Bind Cell Surface and Promote Neurite Extension
L.-W. Jin, H. Ninomiya, J.-M. Roch, D. Schubert, E. Masliah, D.A.C. Otero, and T. Saitoh
- 5471 The Molecular Basis of NMDA Receptor Subtypes: Native Receptor Diversity Is Predicted by Subunit Composition
A.L. Buller, H.C. Larson, B.E. Schneider, J.A. Beaton, R.A. Morrisett, and D.T. Monaghan
- 5485 Intrathalamic Rhythmicity Studied *in vitro*: Nominal T-Current Modulation Causes Robust Antioscillatory Effects
J.R. Huguenard and D.A. Prince
- 5503 GAP-43 Amino Terminal Peptides Modulate Growth Cone Morphology and Neurite Outgrowth
S.M. Strittmatter, M. Igarashi, and M.C. Fishman

- 5514 Quantitative Measurement of Calcium Flux through Muscle and Neuronal Nicotinic Acetylcholine Receptors
S. Vernino, M. Rogers, K.A. Radcliffe, and J.A. Dani
- 5525 Kainate Receptor Gene Expression in the Developing Rat Brain
S. Bahn, B. Volk, and W. Wisden
- 5548 Gene Expression in a Subpopulation of Luteinizing Hormone-Releasing Hormone (LHRH) Neurons Prior to the Preovulatory Gonadotropin Surge
T. Porkka-Heiskanen, J.H. Urban, F.W. Turek, and J.E. Levine
- 5559 Functional Comparisons of Three Glutamate Transporter Subtypes Cloned from Human Motor Cortex
J.L. Arriza, W.A. Fairman, J.I. Wadiche, G.H. Murdoch, M.P. Kavanaugh, and S.G. Amara
- 5570 Nerve Growth Factor Rapidly Prolongs the Action Potential of Mature Sensory Ganglion Neurons in Culture, and This Effect Requires Activation of Gs-coupled Excitatory κ -Opioid Receptors on These Cells
K.-F. Shen and S.M. Crain
- 5580 κ_2 Opioid Receptors Inhibit NMDA Receptor-mediated Synaptic Currents in Guinea Pig CA3 Pyramidal Cells
R.M. Caudle, C. Chavkin, and R. Dubner
- 5590 Oxygen Deprivation Activates an ATP-Inhibitable K⁺ Channel in Substantia Nigra Neurons
C. Jiang, F.J. Sigworth, and G.G. Haddad
- 5603 Age-Associated and Cell-Type-Specific Neurofibrillary Pathology in Transgenic Mice Expressing the Human Midsized Neurofilament Subunit
J.C. Vickers, J.H. Morrison, V.L. Friedrich, Jr., G.A. Elder, D.P. Perl, R.N. Katz, and R.A. Lazzarini
- 5613 Pharmacological Identification of Two Types of Presynaptic Voltage-Dependent Calcium Channels at CA3-CA1 Synapses of the Hippocampus
L.-G. Wu and P. Saggau
- 5623 Amphetamine Regulates Gene Expression in Rat Striatum via Transcription Factor CREB
C. Konradi, R.L. Cole, S. Heckers, and S.E. Hyman
- 5635 Mild Acidosis Delays Hypoxic Spreading Depression and Improves Neuronal Recovery in Hippocampal Slices
G.C. Tombaugh
- 5644 Region-Specific Regulation of Transforming Growth Factor α (TGF α) Gene Expression in Astrocytes of the Neuroendocrine Brain
Y.J. Ma, K. Berg-von der Emde, M. Moholt-Siebert, D.F. Hill, and S.R. Ojeda
- 5652 Properties and Function of Low- and High-Voltage-Activated Ca²⁺ Channels in Hypoglossal Motoneurons
M. Umemiya and A.J. Berger
- 5661 The Effects of L-Glutamate, AMPA, Quisqualate, and Kainate on Retinal Horizontal Cells Depend on Adaptational State: Implications for Rod-Cone Interactions
D. Križaj, A. Akopian, and P. Witkovsky

- 5672 Regenerating Muscle Fibers Induce Directional Sprouting from Nearby Nerve Terminals: Studies in Living Mice
P. van Mier and J.W. Lichtman
- 5687 Heat Shock Proteins Protect against Stress-related Phosphorylation of Tau in Neuronal PC12 Cells That Have Acquired Thermotolerance
B.A. Kirby, C.R. Merrill, H. Ghanbari, and W.C. Wallace
- 5694 Afferents to the Midline Thalamus Issue Collaterals to the Nucleus Tractus Solitarii: An Anatomical Basis for Thalamic and Visceral Reflex Integration
K. Otake, D.J. Reis, and D.A. Ruggiero
- 5708 Disruption of Target Interactions Prevents the Development of Enkephalin Immunoreactivity in Sympathetic Neurons
S. Tyrrell and S.C. Landis
- 5722 Facilitation of Transmission at the Frog Neuromuscular Junction at 0°C Is Not Maximal at Time Zero
W. Van der Kloot

Cover picture: Neuromuscular junction site on a mouse muscle fiber before (above) and after (below) a laser was used to kill the fiber and destroy the junction. The oval area in the lower panel is a plasma bubble in the muscle fiber caused by the laser energy that was focused at that point. This technique is used to damage single muscle fibers and follow their regeneration and reinnervation over time in living mice. See van Mier and Lichtman, pp. 5672–5686.

Persons interested in becoming members of the Society for Neuroscience should address inquiries to the Society for Neuroscience, 11 Dupont Circle, N.W., Suite 500, Washington, D.C. 20036 (202-462-6688).

Instructions for Authors appear at the end of the February 1994 issue. Copies of the Instructions can be obtained by writing to Diane M. Sullenberger, *The Journal of Neuroscience*, Society for Neuroscience, 11 Dupont Circle, N.W., Suite 500, Washington, D.C. 20036 (202-462-6688; fax 202-462-1547; e-mail jn@sfn.org). Submissions should be sent to the above address. Scientific inquiries concerning manuscripts can be made directly to Dr. David C. Van Essen, Editor-in-Chief, *The Journal of Neuroscience*, Department of Anatomy & Neurobiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110 (314-362-2721; fax 314-362-2734; e-mail JNEUROSCI@THALAMUS.WUSTL.EDU).

The Journal of Neuroscience requests that authors send a disk containing an electronic file of their manuscript with each submission. Most word processing software can be used; see the Instructions for Authors for detailed guidelines on acceptable disk and file formats.