

The Journal of Neuroscience

The Official Journal of
the Society for Neuroscience

June 1993
Volume 13 Number 6

- 2273 **Feature Article:** Peptides and the Primary Afferent Nociceptor
J.D. Levine, H.L. Fields, and A.I. Basbaum
- 2287 Response Dynamics and Directional Properties of Nonspiking Local Interneurons in the
Cockroach Cercal System
Y. Kondoh, T. Arima, J. Okuma, and Y. Hasegawa
- 2306 Neural Computations for Sound Pattern Recognition: Evidence for Summation of an Array
of Frequency Filters in an Echolocating Bat
R.C. Roverud
- 2313 Calcium-induced Translocation of Synaptic Vesicles to the Active Site
J.H. Koenig, K. Yamaoka, and K. Ikeda
- 2323 Patch-Clamp Analysis of Spontaneous Synaptic Currents in Supraoptic Neuroendocrine
Cells of the Rat Hypothalamus
J.-P. Wuarin and F.E. Dudek
- 2332 Texture Perception and Afferent Coding Distorted by Cooling the Human Ulnar Nerve
J.R. Phillips and P.B.C. Matthews
- 2342 Hyperactivity and Sensitization to Psychostimulants following Cholera Toxin Infusion into
the Nucleus Accumbens
S.T. Cunningham and A.E. Kelley
- 2351 Highly Polysialylated Neural Cell Adhesion Molecule (NCAM-H) Is Expressed by Newly
Generated Granule Cells in the Dentate Gyrus of the Adult Rat
T. Seki and Y. Arai
- 2359 Synaptic Transmission between Pairs of Retinal Amacrine Cells in Culture
E. Gleason, S. Borges, and M. Wilson
- 2371 An Immunocytochemical Study of Glycine Receptor and GABA in Laminae I-III of Rat
Spinal Dorsal Horn
K. Mitchell, R.C. Spike, and A.J. Todd
- 2382 Primary Structure, Neural-Specific Expression, and Dendritic Location of Human BC200
RNA
H. Tiedge, W. Chen, and J. Brosius
- 2391 Basal versus Apical Dendritic Long-Term Potentiation of Commissural Afferents to
Hippocampal CA1: A Current-Source Density Study
T. Kaibara and L. S. Leung

- 2405 Involvement of a Metalloprotease in Low-Affinity Nerve Growth Factor Receptor Truncation: Inhibition of Truncation *in vitro* and *in vivo*
P.S. DiStefano, D.M. Chelsea, C.M. Schick, and J.F. McKelvy
- 2415 Transplants of Immunologically Isolated Xenogeneic Chromaffin Cells Provide a Long-Term Source of Pain-reducing Neuroactive Substances
J. Sagen, H. Wang, P.A. Tresco, and P. Aebischer
- 2424 An 83 kDa O-GlcNAc-Glycoprotein Is Found in the Axoplasm and Nucleus of *Aplysia* Neurons
S.P. Elliot, R. Schmied, C.A. Gabel, and R.T. Ambron
- 2430 Lesions of the Perirhinal and Parahippocampal Cortices in the Monkey Produce Long-lasting Memory Impairments in the Visual and Tactual Modalities
W.A. Suzuki, S. Zola-Morgan, L.R. Squire, and D.G. Amaral
- 2452 Induced Cell Death in a Thalamic Nucleus during a Restricted Period of Zebra Finch Vocal Development
F. Johnson and S.W. Bottjer
- 2463 Motor Innervation of Dorsoventrally Reversed Wings in Chick/Quail Chimeric Embryos
M.J. Ferns and M. Hollyday
- 2477 Associative Long-Term Potentiation in Piriform Cortex Slices Requires GABA_A Blockade
E.D. Kanter and L.B. Haberly
- 2483 Semisynthetic Sphingolipids Prevent Protein Kinase C Translocation and Neuronal Damage in the Perifocal Area following a Photochemically Induced Thrombotic Brain Cortical Lesion
A. Kharlamov, A. Guidotti, E. Costa, R. Hayes, and D. Armstrong
- 2495 Surface and Cytoskeletal Markers of Rostrocaudal Position in the Mammalian Nervous System
Z. Kaprielian and P.H. Patterson
- 2509 Muscle Agrin: Neural Regulation and Localization at Nerve-induced Acetylcholine Receptor Clusters
E. Lieth and J.R. Fallon
- 2515 Pseudorabies Virus Infection of the Rat Central Nervous System: Ultrastructural Characterization of Viral Replication, Transport, and Pathogenesis
J.P. Card, L. Rinaman, R.B. Lynn, B.-H. Lee, R.P. Meade, R.R. Miselis, and L.W. Enquist
- 2540 Detection of NGF-Like Activity in Human Brain Tissue: Increased Levels in Alzheimer's Disease
K.A. Crutcher, S.A. Scott, S. Liang, W.V. Everson, and J. Weingartner
- 2551 Cellular Distribution of Dopamine D₁ and D₂ Receptors in Rat Medial Prefrontal Cortex
S.L. Vincent, Y. Khan, and F.M. Benes
- 2565 Delayed Pattern Discrimination in Patients with Unilateral Temporal Lobe Damage
M.W. Greenlee, J. Rischewski, T. Mergner, and W. Seeger
- 2575 *In vivo* Development of Voltage-dependent Ionic Currents in Embryonic *Xenopus* Spinal Neurons
M.G. Desarmenien, B. Clendening, and N.C. Spitzer

- 2582 Selective Loss of Hippocampal Granule Cells following Adrenalectomy: Implications for Spatial Memory
C.D. Conrad and E.J. Roy
- 2591 Extrinsic Factors Influence the Expression of Voltage-gated K Currents on Neonatal Rat Sympathetic Neurons
S. McFarlane and E. Cooper
- 2601 Interleukin-1 Induces Substance P in Sympathetic Ganglia through the Induction of Leukemia Inhibitory Factor (LIF)
A.M. Shadiack, R.P. Hart, C.D. Carlson, and G.M. Jonakait
- 2610 Specific High-Affinity Receptors for Neurotrophin-3 on Sympathetic Neurons
G. Dechant, A. Rodríguez-Tébar, R. Kolbeck, and Y.-A. Barde
- 2617 Temporal Changes in β -Tubulin and Neurofilament mRNA Levels after Transection of Adult Rat Retinal Ganglion Cell Axons in the Optic Nerve
L. McKerracher, C. Essagian, and A.J. Aguayo
- 2627 The Development of Synaptic Function and Integration in the Central Auditory System
D.H. Sanes
- 2638 Role of Calcium in Astrocyte Volume Regulation and in the Release of Ions and Amino Acids
E.R. O'Connor and H.K. Kimelberg
- 2651 Mechanisms of Nitric Oxide-mediated Neurotoxicity in Primary Brain Cultures
V.L. Dawson, T.M. Dawson, D.A. Bartley, G.R. Uhl, and S.H. Snyder
- 2662 Coexpression of Multiple Acetylcholine Receptor Genes in Neurons: Quantification of Transcripts during Development
R.A. Corriveau and D.K. Berg
- 2672 Rapid Communication between Neurons and Astrocytes in Primary Cortical Cultures
T.H. Murphy, L.A. Blatter, W.G. Wier, and J.M. Baraban
- 2680 Evidence for "Preterminal" Nicotinic Receptors on GABAergic Axons in the Rat Interpeduncular Nucleus
C. Léna, J.-P. Changeux, and C. Mulle
- 2689 Patterns of Increased Brain Activity Indicative of Pain in a Rat Model of Peripheral Mononeuropathy
J. Mao, D.J. Mayer, and D.D. Price
- 2703 C-fos Expression in the Pons and Medulla of the Cat during Carbachol-induced Active Sleep
J. Yamuy, J.R. Mancillas, F.R. Morales, and M.H. Chase
- 2719 Mutually Exclusive Expression of Alternatively Spliced FMRFamide Transcripts in Identified Neuronal Systems of the Snail *Lymnaea*
K. Bright, E. Kellett, S.E. Saunders, M. Brierley, J.F. Burke, and P.R. Benjamin
- 2730 Motor Axons Preferentially Reinnervate Motor Pathways
T.M.E. Brushart

Cover picture: Rat lumbar motoneurons labeled with horseradish peroxidase and viewed with darkfield illumination. The 40 μ frozen section was reacted with tetramethyl benzidine, counterstained with neutral red, and photographed at 40 power magnification. See Brushart, pp. 2730–2738.

Erratum: On the first page of the table of contents of the April 1993 issue of this Journal, an author's name was misspelled. The correct name of the first author of "Vulnerability of Oligodendroglia to Glutamate: Pharmacology, Mechanisms, and Prevention," beginning on p. 1441, is "A. Oka." The publisher regrets the error.

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

Instructions for Authors appear in the January issue only. Copies of the Instructions can be obtained by writing *The Journal of Neuroscience*, Department of Anatomy and Neurosciences, Marine Biomedical Institute, 200 University Boulevard, Suite 608, Galveston, TX 77555-0843 USA. Submissions should be sent to Dr. William D. Willis, Jr., Editor-in-Chief, at the same address. Inquiries concerning manuscripts can be made directly to the Managing Editor at the offices of the *Journal* (409-772-4684; fax 409-772-4687; e-mail JN@MBIAN.UTMB.EDU).

The Journal of Neuroscience requests that authors send a disk containing an electronic file of their manuscript once the paper is provisionally accepted. See the Instructions for Authors in the January 1993 issue for detailed guidelines on acceptable disk and file formats.

Erratum: In the article "Single Mossy Fiber Axonal Systems of Human Dentate Granule Cells Studied in Hippocampal Slices from Patients with Temporal Lobe Epilepsy," by M. Isokawa et al. (*J Neurosci* 13:1511–1522, April 1993), some data were misaligned in Table 3. The table is reprinted correctly below; note the data for Patient G in the ML column. The publisher regrets the error.

Table 3. Relationships between mossy fiber arborization patterns and other neuropathological findings in the dentate gyrus

Pa- tient	Age (yr)	Sex	Age at seizure onset (yr)	Hilar cell loss	Granule layer cell loss	Mossy fiber reorganization detected by:	Intra- cellularly stained neurons	Mossy fibers in:			
								Hilus	GL	ML	Filopodia
A	36	F	21	0%	21–32% (27 ± 5.5 SEM)	Timm's staining	#1 (B) #2 (B)	x (pl) x			
B	24	F	4	5%	38–46% (42 ± 4.0 SEM)	Timm's staining	#1 (B) #2 (B) #3 (B)	x x x (pl)			
C	44	M	31	0%	35–48% (42 ± 6.5 SEM)	Dynorphin staining	#1 (LY)	x	x (pl)		x
D	29	F	2.5 (convulsion, 10 months)	50%	42–46% (44 ± 2.0 SEM)	Dynorphin staining	#1 (LY)	x			
E	38	F	13	43–50% (4.7 ± 3.5 SEM)	30–52% (38 ± 5.1 SEM)	Dynorphin staining	#1 (LY) #2 (LY)	x x		x	x
F	19	F	1.2	65%	50–51% (51 ± 0.5 SEM)	Dynorphin staining	#1 (LY) #2 (B)	x x (pl)			
G	29	F	5 d (forceps delivery, seizure at birth)	75%	58–66% (62 ± 4.0 SEM)	Timm's and dynorphin staining	#1 (B) #2 (B) #3 (B)	x x (pl) x (pl)		x (pl) x (pl)	x
H	25	M	10	24–75% (50 ± 25.5 SEM)	53–78% (62 ± 5.6 SEM)	Dynorphin staining	#1 (B) #2 (LY)	x x	x (pl)		x
I	15	F	3 (febrile seizure, 1.3 yr)	75%	68–73% (62 ± 9.0 SEM)	No data	#1 (LY) #2 (LY)	x x	x		
J	30	F	1.5	No data	No data	No data	#1 (B)	x (pl)	x (pl)		

Neuropathological information was made available from the data base for UCLA Epilepsy Surgery Program. When cell count was done in more than two locations, the range and the average with SEM are shown. GL, granule cell layer; ML, molecular layer; pl, plexus; B, biocytin-filled neuron; LY, Lucifer yellow-filled neurons.