

The Journal of Neuroscience

The Official Journal of
the Society for Neuroscience

July 1987
Volume 7 Number 7

- 1935 Muller, R.U., J.L. Kubie, and J.B. Ranck, Jr.: Spatial Firing Patterns of Hippocampal Complex-Spike Cells in a Fixed Environment
- 1951 Muller, R.U., and J.L. Kubie: The Effects of Changes in the Environment on the Spatial Firing of Hippocampal Complex-Spike Cells
- 1969 Fishell, G., and D. van der Kooy: Pattern Formation in the Striatum: Developmental Changes in the Distribution of Striatonigral Neurons
- 1979 Lacaille, J.-C., A.L. Mueller, D.D. Kunkel, and P.A. Schwartzkroin: Local Circuit Interactions Between Oriens/Alveus Interneurons and CA1 Pyramidal Cells in Hippocampal Slices: Electrophysiology and Morphology
- 1994 Foster, G.A., M. Schultzberg, T. Hökfelt, M. Goldstein, H.C. Hemmings, Jr., C.C. Ouimet, S.I. Walaas, and P. Greengard: Development of a Dopamine- and Cyclic Adenosine 3':5'-Monophosphate-Regulated Phosphoprotein (DARPP-32) in the Prenatal Rat Central Nervous System, and Its Relationship to the Arrival of Presumptive Dopaminergic Innervation
- 2019 Yee, W.C., and A. Pestronk: Mechanisms of Postsynaptic Plasticity: Remodeling of the Junctional Acetylcholine Receptor Cluster Induced by Motor Nerve Terminal Outgrowth
- 2025 Shipley, M.T., J.H. McLean, and M.M. Behbehani: Heterogeneous Distribution of Neurotensin-like Immunoreactive Neurons and Fibers in the Midbrain Periaqueductal Gray of the Rat
- 2035 Behbehani, M.M., M.T. Shipley, and J.H. McLean: Effect of Neurotensin on Neurons in the Periaqueductal Gray: An *in vitro* Study
- 2041 Schaal, H., D. Goldowitz, U.A.O. Heinlein, A. Unterbeck, C. Ruppert, T. Papenbrock, B. Müller-Hill, W. Vielmetter, and W. Wille: A Highly Abundant Transcript in Adult Murine Cerebellar Granule Cells Contains Repetitive Sequences Homologous to L1
- 2049 Xie, G.-X., and A. Goldstein: Characterization of Big Dynorphins from Rat Brain and Spinal Cord

Cover picture: Distribution of neurotensin (NT) fibers in the midbrain periaqueductal gray (PAG) of the rat. Pseudocolor (upper left) and isodensitometric maps (lower) of the density of immunocytochemically stained NT fibers were created from video images using software (developed by J. Luna and M.T. Shipley, University of Cincinnati College of Medicine) developed for the Magiscan Image Analysis System (Joyce-Loebel/Nikon; Photography by E. Giglio). Using quantitative image analysis methods, it was shown that NT fibers are heterogeneously distributed in PAG (Shipley, et al., this volume, pp. 2025–2034). NT injected in PAG causes long-lasting, naloxone insensitive analgesia. A companion article (Behbehani, et al., pp. 2035–2040) demonstrates that NT causes long-lasting depolarization of PAG neurons in slices even when synaptic transmission is blocked by cobalt, suggesting that NT fibers mediate analgesia by postsynaptic activation of PAG neurons.

- 2056 Cohen, R.S., H.C. Pant, S. House, and H. Gainer: Biochemical and Immunocytochemical Characterization and Distribution of Phosphorylated and Nonphosphorylated Subunits of Neurofilaments in Squid Giant Axon and Stellate Ganglion
- 2075 Hosley, M.A., S.E. Hughes, L.L. Morton, and B. Oakley: A Sensitive Period for the Neural Induction of Taste Buds
- 2081 Nolen, T.G., and R.R. Hoy: Postsynaptic Inhibition Mediates High-Frequency Selectivity in the Cricket *Teleogryllus oceanicus*: Implications for Flight Phonotaxis Behavior
- 2097 Hooper, S.L., and E. Marder: Modulation of the Lobster Pyloric Rhythm by the Peptide Proctolin
- 2113 Harris-Warrick, R.M., and R.E. Flamm: Multiple Mechanisms of Bursting in a Conditional Bursting Neuron
- 2129 Amalric, M., and G.F. Koob: Depletion of Dopamine in the Caudate Nucleus But Not in Nucleus Accumbens Impairs Reaction-Time Performance in Rats
- 2135 Chamberlain, S.C., and R.B. Barlow, Jr.: Control of Structural Rhythms in the Lateral Eye of *Limulus*: Interactions of Natural Lighting and Circadian Efferent Activity
- 2145 Moschella, M.C., and M. Ontell: Transient and Chronic Neonatal Denervation of Murine Muscle: A Procedure to Modify the Phenotypic Expression of Muscular Dystrophy
- 2153 Loring, R.H., and R.E. Zigmond: Ultrastructural Distribution of ¹²⁵I-Toxin F Binding Sites on Chick Ciliary Neurons: Synaptic Localization of a Toxin that Blocks Ganglionic Nicotinic Receptors
- 2163 Carlone, R., J.K. Kim, and M. Rathbone: Purification of a Chick Brain-Derived Growth Factor by Reversed-Phase High-Performance Liquid Chromatography
- 2168 Goodwin, A.W., and J.W. Morley: Sinusoidal Movement of a Grating Across the Monkey's Fingerpad: Representation of Grating and Movement Features in Afferent Fiber Responses
- 2181 Morley, J.W., and A.W. Goodwin: Sinusoidal Movement of a Grating Across the Monkey's Fingerpad: Temporal Patterns of Afferent Fiber Responses
- 2192 Goodwin, A.W., and J.W. Morley: Sinusoidal Movement of a Grating Across the Monkey's Fingerpad: Effect of Contact Angle and Force of the Grating on Afferent Fiber Responses
- 2203 Gallo, V., A. Kingsbury, R. Balázs, and O.S. Jørgensen: The Role of Depolarization in the Survival and Differentiation of Cerebellar Granule Cells in Culture
- 2214 Aoki, C., T.A. Milner, K.-F.R. Sheu, J.P. Blass, and V.M. Pickel: Regional Distribution of Astrocytes with Intense Immunoreactivity for Glutamate Dehydrogenase in Rat Brain: Implications for Neuron-Glia Interactions in Glutamate Transmission
- 2232 Dale, N., E.R. Kandel, and S. Schacher: Serotonin Produces Long-Term Changes in the Excitability of *Aplysia* Sensory Neurons in Culture that Depend on New Protein Synthesis
- 2239 Mountcastle, V.B., B.C. Motter, M.A. Steinmetz, and A.K. Sestokas: Common and Differential Effects of Attentive Fixation on the Excitability of Parietal and Prestriate (V4) Cortical Visual Neurons in the Macaque Monkey

- 2256 Parhad, I.M., A.W. Clark, and J.W. Griffin: Effect of Changes in Neurofilament Content on Caliber of Small Axons: The β,β' -Iminodipropionitrile Model
- 2264 Silver, J., M. Poston, and U. Rutishauser: Axon Pathway Boundaries in the Developing Brain. I. Cellular and Molecular Determinants That Separate the Optic and Olfactory Projections

Instructions to Authors appear in the January issue only. Copies of the Instructions can be obtained by writing the Society for Neuroscience, 11 Dupont Circle, N.W., Suite 500, Washington, DC 20036.

The Journal of Neuroscience (ISSN 0270-6474) is the official journal of the Society for Neuroscience. It is published monthly for the Society, one volume a year, by Oxford University Press, 200 Madison Avenue, New York, NY 10016.

Subscriptions are on a per-volume basis beginning with the January issue. The volume 7 (1987) rates for the U.S. are \$150 for individuals and \$350 for institutions. Outside the U.S. add \$60; single copies are \$30. Student subscription rates are available only through the Society for Neuroscience. Institutional (multiple-reader) rates apply to libraries, schools, hospitals, clinics, group practices, and federal, commercial, and private institutions and organizations. Address subscription and back issue requests to the Journals Department, Oxford University Press, 16-00 Pollitt Drive, Fair Lawn, NJ 07410.

Change of Address notifications must be sent to Oxford's Journals Department at least 60 days in advance. Journals undeliverable because of incorrect addresses will be destroyed. Duplicates can be obtained (if available) from Oxford at the regular price of single issues.

Advertising inquiries should be addressed to Donald Pfarr, Williams & Wilkins, 428 E. Preston Street, Baltimore, MD 21202, telephone 301-528-4000.

Microfilm inquiries should be directed to the Journals Department, Oxford University Press, 16-00 Pollitt Drive, Fair Lawn, NJ 07410.

Reprints of individual articles are available only from the authors.

Japanese yen price is available from our sole agent: Kinokuniya Publications Co., Ltd., Journals Department, P.O. Box 55 Chitose, Tokyo 156, Japan.

Postmaster: Second class postage paid at Washington, DC, and at additional mailing offices; send address changes to the Journals Department, Oxford University Press, 16-00 Pollitt Drive, Fair Lawn, NJ 07410.

The Journal of Neuroscience is indexed by *Current Contents* and *Index Medicus*.

Copyright ©1987 Society for Neuroscience.
All rights reserved.