

THE JOURNAL OF

NEUROSCIENCE

SEPTEMBER 1986

VOLUME 6 NUMBER 9

THE OFFICIAL JOURNAL OF THE SOCIETY FOR NEUROSCIENCE

CONTENTS

RAYMOND, P. A.: Movement of Retinal Terminals in Goldfish Optic Tectum Predicted by Analysis of Neuronal Proliferation	2479
OGURA, A., K. OZAKI, Y. KUDO, AND T. AMANO: Cytosolic Calcium Elevation and cGMP Production Induced by Serotonin in a Clonal Cell of Glial Origin	2489
TYCHSEN, L., AND S. G. LISBERGER: Maldevelopment of Visual Motion Processing in Humans Who Had Strabismus with Onset in Infancy	2495
WILLCOCKSON, W. S., J. KIM, H. K. SHIN, J. M. CHUNG, AND W. D. WILLIS: Actions of Opioids on Primate Spinothalamic Tract Neurons	2509
MATTHEWS, G.: Comparison of the Light-Sensitive and Cyclic GMP-Sensitive Conductances of the Rod Photoreceptor: Noise Characteristics	2521
KAPFHAMMER, J. P., B. E. GRUNEWALD, AND J. A. RAPER: The Selective Inhibition of Growth Cone Extension by Specific Neurites in Culture	2527
RIGDON, G. C., AND J. H. PIRCH: Nucleus Basalis Involvement in Conditioned Neuronal Responses in the Rat Frontal Cortex	2535
GODFREY, E. W., AND E. M. SHOOTER: Nerve Growth Factor Receptors on Chick Embryo Sympathetic Ganglion Cells: Binding Characteristics and Development	2543
LANSER, M. E., J. L. CARRINGTON, AND J. F. FALLON: Survival of Motoneurons in the Brachial Lateral Motor Column of <i>Limbless</i> Mutant Chick Embryos Depends on the Periphery	2551
MAGISTRETTI, P. J., P. R. HOF, AND J.-L. MARTIN: Adenosine Stimulates Glycogenolysis in Mouse Cerebral Cortex: A Possible Coupling Mechanism Between Neuronal Activity and Energy Metabolism	2558
KALIL, K., AND J. H. P. SKENE: Elevated Synthesis of an Axonally Transported Protein Correlates with Axon Outgrowth in Normal and Injured Pyramidal Tracts	2563
WOOD, J. G., P. R. GIRARD, G. J. MAZZEI, AND J. F. KUO: Immunocytochemical Localization of Protein Kinase C in Identified Neuronal Compartments of Rat Brain	2571
CHUANG, D.-M., O. DILLON-CARTER, J. W. SPAIN, M. B. LASKOWSKI, B. L. ROTH, AND C. J. COSCIA: Detection and Characterization of β -Adrenergic Receptors and Adenylate Cyclase in Coated Vesicles Isolated from Bovine Brain	2578
MILNER, T. A., T. H. JOH, AND V. P. PICKEL: Tyrosine Hydroxylase in the Rat Parabrachial Region: Ultrastructural Localization and Extrinsic Sources of Immunoreactivity	2585
VLAHOPOULOS, V., AND W. JAKINOVICH, JR.: A Structure-Activity Study on the Sucrose Taste Antagonist Methyl 4,6-dichloro-4,6-dideoxy- α -D-Galactopyranoside	2604

Continued

Cover picture: Immunofluorescent localization of neurofilaments in rat pyramidal neurons in tissue culture. Staining was with an antibody directed against the 68K, or L, neurofilament subunit, and cultures had been grown for 23 days prior to fixation. This picture was one of a series taken as a result of a collaboration among Gerry Shaw and Klaus Weber (Goettingen, FRG), and Gary Banker (Albany). Magnification is about 1200 \times .

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 130, Washington, DC 20036.

VLAHOPOULOS, V., AND W. JAKINOVICH, JR.: Antagonism of the Gerbil's Sucrose Taste Response by <i>p</i> -Nitrophenyl α -D-Glucopyranoside and Chloramphenicol	2611
ROHRER, H., A. L. ACHESON, J. THIBAUT, AND H. THOENEN: Developmental Potential of Quail Dorsal Root Ganglion Cells Analyzed <i>in vitro</i> and <i>in vivo</i>	2616
WAKADE, A. R., R. K. MALHOTRA, T. R. SHARMA, AND T. D. WAKADE: Changes in Tonicity of Perfusion Medium Cause Prolonged Opening of Calcium Channels of the Rat Chromaffin Cells to Evoke Explosive Secretion of Catecholamines	2625
COLLINS, J. M., AND N. W. SEEDS: Oligodendroglia Development in Cell Culture as Monitored with a Monoclonal Antibody	2635
LINDGREN, C. A., AND D. O. SMITH: Increased Presynaptic ATP Levels Coupled to Synaptic Activity at the Crayfish Neuromuscular Junction	2644
DALE, N., AND S. GRILLNER: Dual-Component Synaptic Potentials in the Lamprey Mediated by Excitatory Amino Acid Receptors	2653
DALE, N.: Excitatory Synaptic Drive for Swimming Mediated by Amino Acid Receptors in the Lamprey	2662
HATTEN, M. E., R. K. H. LIEM, AND C. A. MASON: Weaver Mouse Cerebellar Granule Neurons Fail to Migrate on Wild-Type Astroglial Processes <i>in vitro</i>	2676
WINSKY, L., AND J. A. HARVEY: Retardation of Associative Learning in the Rabbit by an Adenosine Analog as Measured by Classical Conditioning of the Nictitating Membrane Response	2684
WU, S. H., AND D. OERTEL: Inhibitory Circuitry in the Ventral Cochlear Nucleus is Probably Mediated by Glycine	2691
GEIGER, J. D., AND J. I. NAGY: Distribution of Adenosine Deaminase Activity in Rat Brain and Spinal Cord	2707
PAUPARDIN-TRITSCH, D., C. HAMMOND, AND H. M. GERSCHENFELD: Serotonin and Cyclic GMP Both Induce an Increase of the Calcium Current in the Same Identified Molluscan Neurons	2715
REPPERT, S. M., AND W. J. SCHWARTZ: Maternal Suprachiasmatic Nuclei Are Necessary for Maternal Coordination of the Developing Circadian System	2724
OHSAKO, S., I. ISHIDA, T. ICHIKAWA, AND T. DEGUCHI: Cloning and Sequence Analysis of cDNAs Encoding Precursors of Urotensin II- α and - γ	2730
TORRENCE, S. A., AND D. K. STUART: Gangliogenesis in Leech Embryos: Migration of Neural Precursor Cells	2736
TOGA, A. W., E. M. SANTORI, AND M. SAMAEI: Regional Distribution of Flunitrazepam Binding Constants: Visualizing K_d and B_{max} by Digital Image Analysis	2747
WIGSTON, D. J.: Selective Innervation of Transplanted Limb Muscles by Regenerating Motor Axons in the Axolotl	2757
BURROWS, M., AND H.-J. PFLÜGER: Processing by Local Interneurons of Mechanosensory Signals Involved in a Leg Reflex of the Locust	2764

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 6 (1986) rates for the U.S. are \$150 for individuals and \$350 for institutions. Outside the U.S. add \$35; single copies are \$18. 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.

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*.