

The Journal of Neuroscience

The Official Journal of
the Society for Neuroscience

October 1993
Volume 13 Number 10

- 4101 The Direction Change Concept for Reticulospinal Control of Goldfish Escape
M.B. Foreman and R.C. Eaton
- 4114 Geometry of Orientation and Ocular Dominance Columns in Monkey Striate Cortex
K. Obermayer and G.G. Blasdel
- 4130 Long-lasting Expression of JUN and KROX Transcription Factors and Nitric Oxide Synthase in Intrinsic Neurons of the Rat Brain following Axotomy
T. Herdegen, S. Brecht, B. Mayer, J. Leah, W. Kummer, R. Bravo, and M. Zimmermann
- 4146 Brain-derived Neurotrophic Factor (BDNF) Prevents the Degeneration of Medial Septal Cholinergic Neurons following Fimbria Transection
J.K. Morse, S.J. Wiegand, K. Anderson, Y. You, N. Cai, J. Carnahan, J. Miller, P.S. DiStefano, C.A. Altar, R.M. Lindsay, and R.F. Alderson
- 4157 The Layout of Iso-orientation Domains in Area 18 of Cat Visual Cortex: Optical Imaging Reveals a Pinwheel-like Organization
T. Bonhoeffer and A. Grinvald
- 4181 Neurochemical and Histologic Characterization of Striatal Excitotoxic Lesions Produced by the Mitochondrial Toxin 3-Nitropropionic Acid
M.F. Beal, E. Brouillet, B.G. Jenkins, R.J. Ferrante, N.W. Kowall, J.M. Miller, E. Storey, R. Srivastava, B.R. Rosen, and B.T. Hyman
- 4193 Differential Metabolic and Electrical Activity in the Somatic Sensory Cortex of Juvenile and Adult Rats
D.R. Riddle, G. Gutierrez, D. Zheng, L.E. White, A. Richards, and D. Purves
- 4214 Transport of BC1 RNA in Hypothalamo-neurohypophyseal Axons
H. Tiedge, A. Zhou, N.A. Thorn, and J. Brosius
- 4220 Growth Factors Protect PC12 Cells against Ischemia by a Mechanism That Is Independent of PKA, PKC, and Protein Synthesis
I.R. Boniece and J.A. Wagner
- 4229 Calcium Signaling of Glial Cells along Mammalian Axons
S. Kriegler and S.Y. Chiu
- 4246 Dopamine Transporter Expression Confers Cytotoxicity to Low Doses of the Parkinsonism-inducing Neurotoxin 1-Methyl-4-phenylpyridinium
C. Piffl, B. Giros, and M.G. Caron
- 4254 Axonal Guidance Defects in a *Caenorhabditis elegans* Mutant Reveal Cell-extrinsic Determinants of Neuronal Morphology
S. Hekimi and D. Kershaw

- 4272 Intraeostriatal Administration of Glutamate Antagonists Increases Behavioral Activation and Decreases Neostriatal Ascorbate via Nondopaminergic Mechanisms
R.C. Pierce and G.V. Rebec
- 4281 Signal Transduction Events Mediated by the BDNF Receptor gp145^{rkB} in Primary Hippocampal Pyramidal Cell Culture
H.N. Marsh, W.K. Scholz, F. Lamballe, R. Klein, V. Nanduri, M. Barbacid, and H.C. Palfrey
- 4293 Purification and Properties of m1-Toxin, a Specific Antagonist of m1 Muscarinic Receptors
S.I. Max, J.-S. Liang, and L.T. Potter
- 4301 An Electron Microscopic Analysis of Hippocampal Neurons Developing in Culture: Early Stages in the Emergence of Polarity
J.S. Deitch and G.A. Banker
- 4316 Autoradiographic Localization of Serotonin Receptor Subtypes in Cat Visual Cortex: Transient Regional, Laminar, and Columnar Distributions during Postnatal Development
R.H. Dyck and M.S. Cynader
- 4339 The Contributions of NMDA, Non-NMDA, and GABA Receptors to Postsynaptic Responses in Neurons of the Optic Tectum
P.W. Hickmott and M. Constantine-Paton
- 4354 Redistribution of Cytoskeletal Proteins in Mammalian Axons Disconnected from Their Cell Bodies
D.F. Watson, J.D. Glass, and J.W. Griffin
- 4361 Activation of Protein Kinase C by Arachidonic Acid Selectively Enhances the Phosphorylation of GAP-43 in Nerve Terminal Membranes
J.D. Schaechter and L.I. Benowitz
- 4372 Response of Caudate Neurons to Stimulation of Intrinsic and Peripheral Afferents in Normal, Symptomatic, and Recovered MPTP-treated Cats
D.S. Rothblat and J.S. Schneider
- 4379 The Mechanism of Tonic Inhibition of Crayfish Escape Behavior: Distal Inhibition and Its Functional Significance
E.T. Vu, S.C. Lee, and F.B. Krasne
- 4394 Crayfish Tonic Inhibition: Prolonged Modulation of Behavioral Excitability by Classical GABAergic Inhibition
E.T. Vu and F.B. Krasne
- 4403 Extracellular ATP Activates a Cation Conductance and a K⁺ Conductance in Cultured Microglial Cells from Mouse Brain
W. Walz, S. Ilschner, C. Ohlemeyer, R. Banati, and H. Kettenmann
- 4412 Membrane Properties of Ameboid Microglial Cells in the Corpus Callosum Slice from Early Postnatal Mice
J. Brockhaus, S. Ilschner, R.B. Banati, and H. Kettenmann
- 4422 Bcl-2 Affects Survival but Not Neuronal Differentiation of PC12 Cells
A. Batistatou, D.E. Merry, S.J. Korsmeyer, and L.A. Greene
- 4429 Adenosine Triphosphate Depletion Reverses Sodium-Dependent, Neuronal Uptake of Glutamate in Rat Hippocampal Slices
J.E. Madl and K. Burgesser

- 4445 Seizures and Brain Injury in Neonatal Rats Induced by 1S,3R-ACPD, a Metabotropic Glutamate Receptor Agonist
J.W. McDonald, A.S. Fix, J.P. Tizzano, and D.D. Schoepp
- 4456 Two Distinct Rhythmic Motor Patterns Are Driven by Common Premotor and Motor Neurons in a Simple Vertebrate Spinal Cord
S.R. Soffe
- 4470 Loss of Glutamate Decarboxylase mRNA-containing Neurons in the Rat Dentate Gyrus following Pilocarpine-induced Seizures
A. Obenaus, M. Esclapez, and C.R. Houser
- 4486 Hippocampal Changes in Developing Postnatal Mice following Intrauterine Exposure to Domoic Acid
K. Dakshinamurti, S.K. Sharma, M. Sundaram, and T. Watanabe
- 4496 Robust Survival of Isolated Bovine Adrenal Chromaffin Cells following Intraatrial Transplantation: A Novel Hypothesis of Adrenal Graft Viability
S.B. Schueler, J.D. Ortega, J. Sagen, and J.H. Kordower
- 4511 Structural and Functional Specialization of A δ and C Fiber Free Nerve Endings Innervating Rabbit Corneal Epithelium
M.B. MacIver and D.L. Tanelian
- 4525 Reduced Levels of Acetylcholine Receptor Expression in Chick Ciliary Ganglion Neurons Developing in the Absence of Innervation
L.S. Arenella, J.M. Oliva, and M.H. Jacob
- 4538 Auditory Compensation for Early Blindness in Cat Cerebral Cortex
J.P. Rauschecker and M. Korte
- 4549 Neural Substrates of Visual Stimulus–Stimulus Association in Rhesus Monkeys
E.A. Murray, D. Gaffan, and M. Mishkin

Cover picture: Computer generated image of the capillary bed in layer IV of the primary somatic sensory cortex of a rat. Quantitative analysis shows a greater vascularization of barrels compared to interbarrel and nonbarrel cortex. These and other indices of metabolic activity support a relationship between differential cortical growth and underlying electrical activity. See Riddle et al., pp. 4193–4213.

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.