

The Journal of Neuroscience

The Official Journal of
the Society for Neuroscience

January 1993
Volume 13 Number 1

- 1 Activation of Single Neurons in the Rat Nucleus Accumbens during Self-Stimulation of the Ventral Tegmental Area
M. Wolske, P.-P. Rompre, R.A. Wise, and M.O. West
- 13 Enhanced ACh Sensitivity Is Accompanied by Changes in ACh Receptor Channel Properties and Segregation of ACh Receptor Subtypes on Sympathetic Neurons during Innervation *in vivo*
B.L. Moss and L.W. Role
- 29 Brain Glia Release Factors with Opposing Actions upon Neuronal Survival
D. Giulian, K. Vaca, and M. Corpuz
- 38 Activation of Metabotropic Glutamate Receptors Increases cAMP Accumulation in Hippocampus by Potentiating Responses to Endogenous Adenosine
D.G. Winder and P.J. Conn
- 45 Postural Force Fields of the Human Arm and Their Role in Generating Multijoint Movements
R. Shadmehr, F.A. Mussa-Ivaldi, and E. Bizzi
- 63 Major Differences in Ca_i^{2+} Response to Anoxia between Neonatal and Adult Rat CA1 Neurons: Role of Ca_o^{2+} and Na_o^+
J.E. Friedman and G.G. Haddad
- 73 Comparative Characterization and Autoradiographic Distribution of Neuropeptide Y Receptor Subtypes in the Rat Brain
Y. Dumont, A. Fournier, S. St-Pierre, and R. Quirion
- 87 Plasticity in the Frequency Representation of Primary Auditory Cortex following Discrimination Training in Adult Owl Monkeys
G.H. Recanzone, C.E. Schreiner, and M.M. Merzenich
- 104 Novel Opioid Binding Sites Associated with Nuclei of NG108-15 Neurohybrid Cells
M. Belcheva, J. Barg, J. Rowinski, W.G. Clark, C.A. Gloeckner, A. Ho, X.-M. Gao, D.-M. Chuang, and C. Coscia
- 115 Cell-Cell Interactions during the Migration of an Identified Commissural Growth Cone in the Embryonic Grasshopper
P.Z. Myers and M.J. Bastiani
- 127 Growth Cone Dynamics during the Migration of an Identified Commissural Growth Cone
P.Z. Myers and M.J. Bastiani
- 144 Development of the Embryonic Neuromuscular Synapse of *Drosophila melanogaster*
K.S. Broadie and M. Bate

- 167 Development of Larval Muscle Properties in the Embryonic Myotubes of *Drosophila melanogaster*
K.S. Broadie and M. Bate
- 181 Multiple Modes of N-Type Calcium Channel Activity Distinguished by Differences in Gating Kinetics
A.H. Delcour, D. Lipscombe, and R.W. Tsien
- 195 A Large Chondroitin Sulfate Proteoglycan Has the Characteristics of a General Extracellular Matrix Component of Adult Brain
M. Iwata and S.S. Carlson
- 208 Rapid Evolution of the Visual System: A Cellular Assay of the Retina and Dorsal Lateral Geniculate Nucleus of the Spanish Wildcat and the Domestic Cat
R.W. Williams, C. Cavada, and F. Reinoso-Suárez
- 229 Simultaneous Pontine and Basal Forebrain Microinjections of Carbachol Suppress REM Sleep
H.A. Baghdoyan, J.L. Spotts, and S.G. Snyder
- 243 Afferent Spontaneous Electrical Activity Promotes the Survival of Target Cells in the Developing Retinotectal System of the Rat
L. Galli-Resta, M. Ensini, E. Fusco, A. Gravina, and B. Margheritti
- 251 Damage to the Perirhinal Cortex Exacerbates Memory Impairment following Lesions to the Hippocampal Formation
S. Zola-Morgan, L.R. Squire, R.P. Clower, and N.L. Rempel
- 266 Time Course of Extracellular Dopamine and Behavioral Sensitization to Cocaine. I. Dopamine Axon Terminals
P.W. Kalivas and P. Duffy
- 276 Time Course of Extracellular Dopamine and Behavioral Sensitization to Cocaine. II. Dopamine Perikarya
P.W. Kalivas and P. Duffy
- 285 Initial Tract Formation in the Mouse Brain
S.S. Easter, Jr., L.S. Ross, and A. Frankfurter
- 300 Directed Expression of an Oncogene to the Olfactory Neuronal Lineage in Transgenic Mice
B.L. Largent, R.G. Sosnowski, and R.R. Reed
- 313 Prenatal Development of Excitability in Cat Retinal Ganglion Cells: Action Potentials and Sodium Currents
I. Skalióra, R.P. Scobey, and L.M. Chalupa
- 324 The Roles of Sex, Innervation, and Androgen in Laryngeal Muscle of *Xenopus laevis*
M.L. Tobias, M.L. Marin, and D.B. Kelley
- 334 The Highly Irregular Firing of Cortical Cells Is Inconsistent with Temporal Integration of Random EPSPs
W.R. Softky and C. Koch
- 351 Orienting Head Movements Resulting from Electrical Microstimulation of the Brainstem Tegmentum in the Barn Owl
T. Masino and E.I. Knudsen

- 371 Sound-Localization Deficits Induced by Lesions in the Barn Owl's Auditory Space Map
H. Wagner
- 387 The Expression of the Protein p68/70 within the Goldfish Visual System Suggests a Role in Both Regeneration and Neurogenesis
G.R. Wilmot, P.A. Raymond, and B.W. Agranoff
- 402 Characterization of the Glutamate Transporter in Retinal Cones of the Tiger Salamander
S. Eliasof and F. Werblin
- i Instructions for Authors

Cover picture: Mouse embryo, embryonic day 9.5, labeled with an antibody to neuron-specific Class III beta-tubulin and whole-mounted. Easter et al. (pp. 283–297) have used this antibody to reveal the first tracts in the mouse's central and peripheral nervous systems. The large protuberance pointing to the right at the top is the developing cerebral vesicle; the smaller one below, the mandible. The plexus of cells and axons at the top center and left includes the mesencephalic nucleus and descending tract of the trigeminal nerve, which develop precociously in the mouse. A more detailed description of a similar image can be found in the legend of Figures 3 and 4 of the paper. Magnification, 120×.

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 at the end of this issue. 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 this issue for detailed guidelines on acceptable disk and file formats.