

# The Journal of Neuroscience

The Official Journal of  
the Society for Neuroscience

July 1992  
Volume 12 Number 7

---

- 2439 **Feature Article: Molecular Mechanisms of Drug Addiction**  
*E.J. Nestler*
- 2451 GABA-mediated Positive Autofeedback Loop Controls Horizontal Cell Kinetics in Tiger Salamander Retina  
*M. Kamermans and F. Werblin*
- 2464 Synaptic Basis for Developmental Plasticity in a Birdsong Nucleus  
*R. Mooney*
- 2478 Disparity Sensitivity of Neurons in Monkey Extrastriate Area MST  
*J.-P. Roy, H. Komatsu, and R.H. Wurtz*
- 2493 Sensory Tuning beyond the Sensory System: An Initial Analysis of Auditory Response Properties of Neurons in the Lateral Amygdaloid Nucleus and Overlying Areas of the Striatum  
*F. Bordi and J. LeDoux*
- 2504 Spatiotemporal Increases in Epidermal Growth Factor Receptors following Peripheral Nerve Injury  
*J.G. Toma, S. Pareek, P. Barker, T.C. Mathew, R.A. Murphy, A. Acheson, and F.D. Miller*
- 2516 A Nonphotic Stimulus Causes Instantaneous Phase Advances of the Light-entrainable Circadian Oscillator of the Syrian Hamster but Does Not Induce the Expression of *c-fos* in the Suprachiasmatic Nuclei  
*S. Mead, F.J.P. Ebling, E.S. Maywood, T. Humby, J. Herbert, and M.H. Hastings*
- 2523 Olfactory Receptor Neurons from Antennae of Developing Male *Manduca sexta* Respond to Components of the Species-specific Sex Pheromone *in vitro*  
*M. Stengl, F. Zufall, H. Hatt, and J.G. Hildebrand*
- 2532 *In vitro* Neurogenesis by Neuronal Precursor Cells Derived from the Adult Songbird Brain  
*S.A. Goldman, A. Zaremba, and D. Niedzwiecki*
- 2542 Functional Anatomy of Human Procedural Learning Determined with Regional Cerebral Blood Flow and PET  
*S.T. Grafton, J.C. Mazziotta, S. Presty, K.J. Friston, R.S.J. Frackowiak, and M.E. Phelps*
- 2549 Estradiol Mediates Fluctuation in Hippocampal Synapse Density during the Estrous Cycle in the Adult Rat  
*C.S. Woolley and B.S. McEwen*
- 2555 Chromosomal Localization of Human Glutamate Receptor Genes  
*J.O. McNamara, J.H. Eubanks, J.D. McPherson, J.J. Wasmuth, G.A. Evans, and S.F. Heinemann*

- 2563 Gene Regulation in an Ascending Nociceptive Pathway: Inflammation-induced Increase in Preprotachykinin mRNA in Rat Lamina I Spinal Projection Neurons  
*K. Noguchi and M.A. Ruda*
- 2573 NGF Induces the Expression of the VGF Gene through a cAMP Response Element  
*R.J. Hawley, R.J. Scheibe, and J.A. Wagner*
- 2582 Enduring Memory Impairment in Monkeys after Ischemic Damage to the Hippocampus  
*S. Zola-Morgan, L.R. Squire, N.L. Rempel, R.P. Clower, and D.G. Amaral*
- 2597 A Cell-Surface Heparan Sulfate Proteoglycan Mediates Neural Cell Adhesion and Spreading on a Defined Sequence from the C-Terminal Cell and Heparin Binding Domain of Fibronectin, FN-C/H II  
*P.K. Haugen, P.C. Letourneau, S.L. Drake, L.T. Furcht, and J.B. McCarthy*
- 2609 Dynamic Regulation of *NGFI-A* (*zif268*, *egr1*) Gene Expression in the Striatum  
*R. Moratalla, H.A. Robertson, and A.M. Graybiel*
- 2623 Regulation of Somatodendritic Dopamine Release in the Ventral Tegmental Area by Opioids and GABA: An *in vivo* Microdialysis Study  
*M.A. Klitenick, P. DeWitte, and P.W. Kalivas*
- 2633 Differential Effects of Serotonin, FMRFamide, and Small Cardioactive Peptide on Multiple, Distributed Processes Modulating Sensorimotor Synaptic Transmission in *Aplysia*  
*J.P. Pieroni and J.H. Byrne*
- 2648 Calcium Excitability and Oscillations in Suprachiasmatic Nucleus Neurons and Glia *in vitro*  
*A.N. van den Pol, S.M. Finkbeiner, and A.H. Cornell-Bell*
- 2665 Tumor Necrosis Factor Modulates Ca<sup>2+</sup> Currents in Cultured Sympathetic Neurons  
*B. Soliven and J. Albert*
- 2672 The Effect of Visual Experience on Development of NMDA Receptor Synaptic Transmission in Kitten Visual Cortex  
*K. Fox, N. Daw, H. Sato, and D. Czepita*
- 2685 Three-Dimensional Structure of Dendritic Spines and Synapses in Rat Hippocampus (CA1) at Postnatal Day 15 and Adult Ages: Implications for the Maturation of Synaptic Physiology and Long-term Potentiation  
*K.M. Harris, F.E. Jensen, and B. Tsao*
- 2706 Presynaptic Control of Modulatory Fibers by Their Neural Network Targets  
*M.P. Nusbaum, J.M. Weimann, J. Golowasch, and E. Marder*
- 2715 Prostaglandin E<sub>2</sub> Exerts an Awakening Effect in the Posterior Hypothalamus at a Site Distinct from That Mediating Its Febrile Action in the Anterior Hypothalamus  
*H. Onoe, Y. Watanabe, K. Ono, Y. Koyama, and O. Hayaishi*
- 2726 The Lack of Effect of Basic and Acidic Fibroblast Growth Factors on the Naturally Occurring Death of Neurons in the Chick Embryo  
*R.W. Oppenheim, D. Prevette, and F. Fuller*
- 2735 The *period* Gene Encodes a Predominantly Nuclear Protein in Adult *Drosophila*  
*X. Liu, L.J. Zwiebel, D. Hinton, S. Benzer, J.C. Hall, and M. Rosbash*
- 2745 Estrogen Suppresses  $\mu$ -Opioid- and GABA<sub>B</sub>-mediated Hyperpolarization of Hypothalamic Arcuate Neurons  
*M.J. Kelly, M.D. Loose, and O.K. Ronnekleiv*

- 2751 Astrocyte Precursors in Neonatal Rat Spinal Cord Cultures  
*J. Fok-Seang and R.H. Miller*
- 2765 Nicotine Binding and Nicotinic Receptor Subunit RNA after Chronic Nicotine Treatment  
*M.J. Marks, J.R. Pauly, S.D. Gross, E.S. Deneris, I. Hermans-Borgmeyer, S.F. Heinemann, and A.C. Collins*
- 2785 Intrinsic Lattice Connections of Macaque Monkey Visual Cortical Area V4  
*T. Yoshioka, J.B. Levitt, and J.S. Lund*
- 2803 Multiple Axonal Spike Initiation Zones in a Motor Neuron: Serotonin Activation  
*P. Meyrand, J.M. Weimann, and E. Marder*
- 2813 A Signal Sequence Mediates the Retrograde Transport of Proteins from the Axon Periphery to the Cell Body and Then into the Nucleus  
*R.T. Ambron, R. Schmied, C.-C. Huang, and M. Smedman*
- 2819 Intracellular Recordings from Neurobiotin-labeled Cells in Brain Slices of the Rat Medial Nucleus of the Trapezoid Body  
*M.I. Banks and P.H. Smith*
- 2838 Developmental Changes in Calcium Conductances Contribute to the Physiological Maturation of Cerebellar Purkinje Neurons in Culture  
*D.L. Gruol, C.R. Deal, and A.J. Yool*
- 2849 Somatic Gene Transfer of Nerve Growth Factor Promotes the Survival of Axotomized Septal Neurons and the Regeneration of Their Axons in Adult Rats  
*M.D. Kawaja, M.B. Rosenberg, K. Yoshida, and F.H. Gage*
- 2865 Spontaneous Locomotor Hyperactivity in a Mouse Mutant with a Deletion Including the *Snap* Gene on Chromosome 2  
*E.J. Hess, H.A. Jinnah, C.A. Kozak, and M.C. Wilson*
- 2875 Rapid Development of Dopaminergic Supersensitivity in Reserpine-treated Rats Demonstrated with <sup>14</sup>C-2-Deoxyglucose Autoradiography  
*J.M. Trugman and C.L. James*

**Cover picture:** Fluorescent *in situ* suppression of a yeast artificial chromosome (YAC) containing human GluR2 gene to metaphase spread of human chromosomes. Arrows point to the two pairs of bright yellow spots located on equivalent positions of sister chromatids of chromosome 4. See McNamara et al., pp. 2555–2562.

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 to Authors appear in the January issue only. Copies of the Instructions can be obtained by writing *The Journal of Neuroscience*, Department of Neurobiology, Box 3209, 101G Bryan Building, Research Drive, Duke University Medical Center, Durham, NC 27710. Submissions should be sent to Dr. Dale Purves, editor-in-chief, at the same address. Inquiries concerning manuscripts can be made directly to Dianitia Hutcheson, managing editor, at the offices of the *Journal* (919-684-3084; FAX 919-684-8573; Bitnet JNS@NEURO.DUKE.EDU).

*The Journal of Neuroscience* encourages authors to send a disk containing an electronic file of their manuscript once the paper is provisionally accepted. See the Instructions to Authors in the January 1992 issue for detailed guidelines on acceptable disk and file formats.