

# THE JOURNAL OF NEUROSCIENCE

FEBRUARY 1985

VOLUME 5 NUMBER 2

THE OFFICIAL JOURNAL OF THE SOCIETY FOR NEUROSCIENCE

---

## CONTENTS

- INNOCENTI, G. M., D. O. FROST, AND J. ILLES: Maturation of Visual Callosal Connections in Visually Deprived Kittens: A Challenging Critical Period 255
- VITO, C. C., M. J. BAUM, C. BLOOM, AND T. O. FOX: Androgen and Estrogen Receptors in Perinatal Ferret Brain 268
- KETTNER, R. E., J. -Z. FENG, AND J. F. BRUGGE: Postnatal Development of the Phase-locked Response to Low Frequency Tones of Auditory Nerve Fibers in the Cat 275
- ALLEN, W. K., AND R. AKESON: Identification of a Cell Surface Glycoprotein Family of Olfactory Receptor Neurons with a Monoclonal Antibody 284
- IMPERATO, A., AND G. DI CHIARA: Dopamine Release and Metabolism in Awake Rats after Systemic Neuroleptics as Studied by Trans-striatal Dialysis 297
- TOGARI, A., G. DICKENS, H. KUZUYA, AND G. GUROFF: The Effect of Fibroblast Growth Factor on PC12 Cells 307
- WALLMAN, J., AND J. VELEZ: Directional Asymmetries of Optokinetic Nystagmus: Developmental Changes and Relation to the Accessory Optic System and to the Vestibular System 317
- MCKENNA, O. C., AND J. WALLMAN: Functional Postnatal Changes in Avian Brain Regions Responsive to Retinal Slip: A 2-Deoxy-D-Glucose Study 330
- IGNATIUS, M. J., C. E. CHANDLER, AND E. M. SHOOTER: Nerve Growth Factor-treated, Neurite-bearing PC12 Cells Continue to Synthesize DNA 343
- JAMES, W. M., AND W. L. KLEIN:  $\alpha$ -Bungarotoxin Receptors on Neurons Isolated from Turtle Retina: Molecular Heterogeneity of Bipolar Cells 352
- MAGISTRETTI, P. J., AND M. SCHORDERET: Norepinephrine and Histamine Potentiate the Increases in Cyclic Adenosine 3':5'-Monophosphate Elicited by Vasoactive Intestinal Polypeptide in Mouse Cerebral Cortical Slices: Mediation by  $\alpha_1$ -Adrenergic and H<sub>1</sub>-Histaminergic Receptors 362
- ROGERS, S. L., J. B. MCCARTHY, S. L. PALM, L. T. FURCHT, AND P. C. LETOURNEAU: Neuron-specific Interactions with Two Neurite-promoting Fragments of Fibronectin 369
- SOBUE, G., AND D. PLEASURE: Adhesion of Axolemmal Fragments to Schwann Cells: A Signal- and Target-specific Process Closely Linked to Axolemmal Induction of Schwann Cell Mitosis 379
- KRAMER, A. P., AND D. A. WEISBLAT: Developmental Neural Kinship Groups in the Leech 388
- SAVAGE, D. D., L. C. RIGSBEE, AND J. O. MCNAMARA: Knife Cuts of Entorhinal Cortex: Effects on Development of Amygaloid Kindling and Seizure-induced Decrease of Muscarinic Cholinergic Receptors 408
- BLOOM, J. W., J. BUTLER, J. BRIERLEY, AND E. COSMOS: Direct Electrical Stimulation Promotes Growth and Enhances Survival of Aneurogenic Muscles of the Chick Embryo 414

*Contents continued on next page*

*Cover picture:* The distribution of [<sup>3</sup>H]norepinephrine-labeled fibers in the myenteric plexus of a fetal rat at embryonic day 15. From the paper by M. D. Gershon, T. P. Rothman, T. H. Joh, and G. N. Teitelman, which appeared in the September 1984 issue of *The Journal of Neuroscience* (4: 2269-2280). Micrograph kindly provided by Dr. Gershon.

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., Washington, DC 20036, Suite 130.

Contents Continued

|   |     |
|---|-----|
| FREY, K. A., R. L. E. EHRENKAUFER, S. BEAUCAGE, AND B. W. AGRANOFF: Quantitative <i>In Vivo</i> Receptor Binding. I. Theory and Application to the Muscarinic Cholinergic Receptor                                  | 421 |
| ZARBIN, M. A., M. J. KUCHAR, T. L. O'DONOHUE, S. S. WOLF, AND T. W. MOODY: Autoradiographic Localization of ( <sup>125</sup> I-Tyr <sup>4</sup> )Bombesin-binding Sites in Rat Brain                                | 429 |
| HEMPSTEAD, J. L., AND J. I. MORGAN: A Panel of Monoclonal Antibodies to the Rat Olfactory Epithelium  | 438 |
| FRIED, G., L. TERENIUS, T. HÖKFELT, AND M. GOLDSTEIN: Evidence for Differential Localization of Noradrenaline and Neuropeptide Y in Neuronal Storage Vesicles Isolated from Rat Vas Deferens                        | 450 |
| LNENICKA, G. A., AND H. L. ATWOOD: Age-dependent Long-term Adaptation of Crayfish Phasic Motor Axon Synapses to Altered Activity  | 459 |
| RICHTER-LANDSBERG, C., L. A. GREENE, AND M. L. SHELANSKI: Cell Surface Thy-1-cross-reactive Glycoprotein in Cultured PC12 Cells: Modulation by Nerve Growth Factor and Association with the Cytoskeleton            | 468 |
| CRAWLEY, J. N., P. T. NINAN, D. PICKAR, G. P. CHROUSOS, M. LINNOILA, P. SKOLNICK, AND S. M. PAUL: Neuropharmacological Antagonism of the $\beta$ -Carboline-induced "Anxiety" Response in Rhesus Monkeys            | 477 |
| LEVAY, S., M. CONNOLLY, J. HOUDE, AND D. C. VAN ESSEN: The Complete Pattern of Ocular Dominance Stripes in the Striate Cortex and Visual Field of the Macaque Monkey  | 486 |
| FIEKERS, J. F.: Concentration-dependent Effects of Neostigmine on the Endplate Acetylcholine Receptor Channel Complex   | 502 |
| HEILIGENBERG, W., AND G. ROSE: Phase and Amplitude Computations in the Midbrain of an Electric Fish: Intracellular Studies of Neurons Participating in the Jamming Avoidance Response of <i>Eigenmannia</i>         | 515 |
| RANSOM, B. R., C. L. YAMATE, AND B. W. CONNORS: Activity-dependent Shrinkage of Extracellular Space in Rat Optic Nerve: A Developmental Study   | 532 |
| GOH, Y., I. LEDERHENDLER, AND D. L. ALKON: Input and Output Changes of an Identified Neural Pathway Are Correlated with Associative Learning in <i>Hermisenda</i>   | 536 |
| BISSERBE, J. -C., J. PATEL, AND P. J. MARANGOS: Autoradiographic Localization of Adenosine Uptake Sites in Rat Brain Using [ <sup>3</sup> H]Nitrobenzylthioinosine  | 544 |
| MANTYH, P. W., AND S. P. HUNT: Thyrotropin-releasing Hormone (TRH) Receptors: Localization by Light Microscopic Autoradiography in Rat Brain Using [ <sup>3</sup> H] [3-Me-His <sup>2</sup> ]TRH as the Radioligand | 551 |
| FAMIGLIETTI, E. V.: Starburst Amacrine Cells: Morphological Constancy and Systematic Variation in the Anisotropic Field of Rabbit Retinal Neurons   | 562 |