

Contents

I. Biochemical Analysis of Metabolic Pathways

Adenosine in Neurohumoral and Regulatory Roles in the Brain. By H. McILWAIN .	3
Lipid Metabolism and its Regulation in Brain Tissue. By G. PORCELLATI	12
Choline and its Metabolic Successors in Brain. By H. KEWITZ, K. DROSS, and O. PLEUL	21
Structural and Functional Significance of Brain Glycoproteins. By C. DI BENEDETTA	33
Antimetabolic Action on the Pentose Phosphate Pathway in the Central Nervous System Induced by 6-Aminonicotinamide. By H. HERKEN, K. LANGE, H. KOLBE, and K. KELLER	41
Studies of Flux Rates at the Glucose 6-Phosphate Crossover. By K. LANGE, K. KELLER, and H. KOLBE	55
Purification and Regulation of Phosphate-Activated Pig Brain Glutaminase. By E. KVAMME, G. SVENNEBY, and I. AA. TORGNER	63
Functional Aspects of Nucleic Acid Metabolism in Brain. By A. GIUDITTA	70
Uptake and Action of Glycine in Cultures of Central Nervous Tissue from Rat. By L. HÖSLI, E. HÖSLI, and P. F. ANDRÈS	78
Neuronal Activity and Axonal Flow. By G. W. KREUTZBERG and P. SCHUBERT . .	84
Intra-Axonal Transport of Young Amine Granules: Implications for Nerve-Terminal Function. By A. DAHLSTRÖM and J. HÄGGENDAL	94
The Application of Micromethods to Neurochemistry. By V. NEUHOFF	104
Serum as Medium for Brain and Other Tissues Respiring <i>in vitro</i> . By M. SANGIOVANNI, A. FOSSATI, G. B. GERVAZI, F. SCROLLINI, S. FERRI, and E. GORI	115

II. Membrane Function and Neurotransmission

Importance of Structure and Organization for the Chemical Reactions in Excitable Membranes. By D. NACHMANSON	121
Allostery and Permeability of Cellular Membranes. By E. SCHOFFENIELS	138

Release of ^3H -Acetylcholine and ^3H -Choline from the Cerebral Cortex of the Rat Following Administration of ^3H -Choline. By G. PEPEU, F. CRABAI, A. MULAS, and M. L. MULAS	147
Changes in the Enzymes for the Metabolism of Acetylcholine During Development of the Central Nervous System. By G. GIACOBINI and G. FILOGAMO	153
Acetylcholinesterase and Choline Acetyltransferase in Hippocampus after Various Septal Lesions in Rats. By B. ODERFELD-NOWAK, O. NARKIEWICZ, J. DABROWSKA, A. WIERASZKO, and M. GRADKOWSKA	158
Subcellular Localization of Glycosyl-Transferases in Synaptosomes and Mitochondria of Brain. By P. LOUISOT and P. BROQUET	164
Neurochemical Aspects of Behavior. By L. VALZELLI	167
Histamine in the Brain: Importance of Transmethylation Processes and Their Regulation. By J.-C. SCHWARTZ, M. BAUDRY, F. CHAST, H. POLLARD, S. BISCHOFF, and M. S. KRISHNAMOORTHY	172
Macromolecular Organization of Membranes and Organelles in Nerve Tissue. By V. DI CARLO	185

III. Hormonal and Pharmacological Studies

Effects of Ergot DH-Alkaloids on the Metabolism and Function of the Brain. An Approach Based on Studies with DH-Ergonine. By A. CERLETTI, H. EMMENEGGER, A. ENZ, P. IWANGOFF, W. MEIER-RUGE, and J. MUSIL	201
Effect of Nicergoline on Some Ischemia-Induced Metabolic Changes in the Brain of Cat. By A. MORETTI, L. PEGRASSI, and G. K. SUCHOWSKY †	213
Interference of Neurologically Active Drugs with Metabolism of RNA in Brain. By E. GENAZZANI and R. DI CARLO	217
Some Histochemical, Biochemical, and Pharmacological Aspects of Differentiation of Neuroblastoma Cells of Mouse. By P. MANDEL, J. CIESIELSKI-TRESKA, J. C. HERMETET, L. HERTZ, C. NISSEN, G. THOLEY and F. WARTER	223
Analogues of ACTH, Conditioned Avoidance Behaviour and Metabolism of Macromolecules in Brain of Rat. By P. SCHOTMAN and W. H. GISPEN	231
Hypophysectomy and Metabolism of Brain Proteins. By M. E. A. REITH, W. H. GISPEN, and P. SCHOTMAN	236
Early Effects of Thyroxine and Reserpine on the Hypothalamic-Pituitary-Thyroid Axis of Young Rats. By F. CAVIEZEL, G. GAVAZZI, and L. COLOMBO	241
Subject Index	245