

B I B L I O G R A P H Y

BIBLIOGRAPHY

- Acs, Z., Palkovits, M. and Stark, E. (1980) Changes of glutamic acid decarboxylase activity after dexamethasone in selected areas of the rat brain. *Neurosci. Letts.*, 19, 97-101.
- Acs, Z. and Stark, E. (1978) Possible role of γ -aminobutyric acid synthesis in the mechanism of dexamethasone feedback action. *J. Endocri.*, 77, 137-141.
- Adam, P.A.J. and Haynes, R.C.Jr. (1969) Control of hepatic mitochondrial CO₂ fixation by glucagon, epinephrine and cortisol. *J. Biol. Chem.*, 244, 6444-6450.
- Addison, T. (1855) On the constitutional and local effects of disease of the suprarenal capsules. Samuel Highley, London.
- Aizenman, Y. and De Vellis, J. (1987) Synergistic action of thyroid hormone, insulin and hydrocortisone on astrocyte differentiation. *Brain Res.*, 414, 301-308.
- Alexis, M.N., Stylinopoulou, F., Kitriki, E. and Sekeris, C.E. (1983) The distribution and properties of the glucocorticoid receptor from rat brain and pituitary. *J. Biol. Chem.*, 258, 4710-4714.
- Ali, M. and Vedeckis, W.V. (1987) The glucocorticoid receptor protein binds to transfer RNA. *Science*, 235, 467-470.
- Alivisatos, S.G.A., Deliconstantinos, G. and Theodosiadu, G.P. (1981). Specificity of binding of cholesterol, steroid hormones and other compounds in synaptosomal plasma membrane and their effect on ouabain sensitive ATPase. *Biochem. Biophys. Acta.*, 643, 650-658.
- Altman, A. and Bayer, S. (1975) Postnatal development of the hippocampal dentate gyrus under experimental conditions. In "The Hippocampus" Vol.1, Eds. Isaacson, R.L. and Pribram, K.H., New York : Plenum, pp. 95-122.
- Anderson, D.K. and Means, D.K. (1985) Iron-induced lipid peroxidation in spinal cord. Protection with mannitol and methyl prednisolone. *J. Free Rad. Biol. Med.*, 1, 59-64.
- Aranguuez, M.I., Goya, L. and Pascual-Leon, A.M. (1986) Changes in blood glucose, liver glycogen, ketone bodies and plasma insulin in suckling rats treated with a single high cortisol dose one day after birth. *Acta Endocrinologica*, 113, 598-603.
- Ariyoshi, M. and Akasu, T. (1987) Voltage-clamp studies of the inhibition of γ -aminobutyric acid response by glucocorticoids in bullfrog primary afferent neurons. *Brain Res.* 435, 241-248.

- Azmitia, E.C. Jr. and Mc Ewen, B.S. (1974) Adrenocortical influence on rat brain tryptophan hydroxylase activity. *Brain Res.*, 78, 291-302.
- Baker, P.C., Hoff, K.M. and Smith, M.D. (1974) The maturation of monoamine oxidase and 5-hydroxyindoleacetic acid in regions of mouse brain. *Brain Res.*, 65, 255-264.
- Balazs, R., Lewis, P.D. and Patel, A.J. (1975a) Effects of metabolic factors on brain development. In "Growth and development of the brain". Ed. Brazier, M.A.B., Raven Press, New York, pp. 83-115.
- Balazs, R., Patel, A.J. and Hajos, F. (1975b) Factors affecting the biochemical maturation of the brain : effects of hormones during early life. *Psychoneuroendocrin.*, 1, 25-36.
- Ballard, P.J. and Tomkins, G.M. (1970) Glucocorticoid induced alterations in the surface membrane of cultured hepatoma cells. *J. Cell Biol.*, 47, 222-234.
- Banay-Schwartz, M., Zanchin, G., De Guzman, T. and Lajtha, A. (1979). The effect of corticosteroids on amino acid content of brain tissue preparations. *Psychoneuroendocrin.*, 4, 207-217.
- Bartholini, G. and Pletscher, A. (1969) Enhancement of tyrosine hydroxylation within the brain by chlorpromazine. *Experientia*, 25, 919-920.
- Bartlett, G.R. (1959) Phosphorous assay in column chromatography. *J. Biol. Chem.*, 234, 466-468.
- Bass, A.D., Chambers, J.W. and Richtarik, A.A. (1963) The effect of hydrocortisone on ALB uptake by the isolated perfused rat liver. *Life Sci.*, 4, 266-270.
- Bass, N.H., Netsky, M.G. and Young, E. (1969) Microchemical studies of postnatal development in rat cerebrum. II. Formation of myelin. *Neurology*, 19, 405-409.
- Bayon, A., Possani, L.D., Tapia, M. and Tapia, R. (1977) Kinetics of brain glutamate decarboxylase : interactions with glutamate, pyridoxal 5'-phosphate and the glutamate-pyridoxal 5'-phosphate schiff base. *J. Neurochem.*, 29, 519-525.
- Beckett, G.J. and Boyd, G.S. (1975) Evidence for the activation of bovine cholesterol ester hydrolase by a phosphorylation involving an adenosine 3',5'-monophosphate dependent protein kinase. *Biochem. Soc. Trans.*, 3, 892-894.
- Becu-Villalobos, D., Lacau, I.M. and Libertun, C. (1985) p-Tyramine, a natural amine, inhibits prolactin release in vivo. *Endocrinology*, 116, 2044-2048.

- Berl, S. (1966). Glutamine synthetase : determination of its distribution in brain during development. *Biochemistry*, 5, 916-922.
- Berl, S. and Purpura, D.P. (1966) Regional development of glutamic acid compartmentation in immature brain. *J.Neurochem.*, 13, 293-304.
- Biggio, G., Corda, M.G., Concas, S.A., Rossetti, D.Z. and Gessa, G.L. (1981) Rapid changes in GABA binding induced by stress different areas of the rat brain. *Brain Res.*, 229, 363-369.
- Black, I.B. (1982) Stages of neurotransmitter development in autonomic neurons. *Science*, 215, 1198-1204.
- Blackwell, G.J., Carnuccio, R., DiRosa, M., Flower, R.J., Parente, L. and Persico, P. (1980) Macrocortin : polypeptide causing the antiphospholipase effect of glucocorticoids. *Nature*, 287, 147-149.
- Bliss, E.L. and Zwanziger, J. (1966) Brain amines and emotional stress. *J. Psychiat. Res.*, 4, 189-198.
- Bohn, M.C. (1979) Effect of hydrocortisone on neurogenesis in the neonatal rat brain : a morphological and autoradiographic study. (Ph.D. dissertation) Storrs : Univ. of Connecticut.
- Bohn, M.C. (1980) Granule cell genesis in the hippocampus of rats treated neonatally with hydrocortisone. *Neuroscience*, 5, 2003-2012.
- Bohn, M.C. (1983) Role of glucocorticoids in expression and development of phenylethanolamine N-methyltransferase (PNMT) in cells derived from neural crest - a review. *Psychoneuroendocrin.*, 3, 381-390.
- Bohn, M.C. and Friedrich, V.L. Jr. (1982) Recovery of myelination in rat optic nerve after developmental retardation by cortisol. *J. Neuroscience*, 2, 1292-1298.
- Bohn, M.C. and Lauder, J.M. (1978) The effects of neonatal hydrocortisone on rat cerebellar development. An autoradiographic and light microscopic study. *Dev. Neurosci.*, 1, 250-256.
- Bohn, M.C., Goldstein, M. and Black, I.B. (1981) Role of glucocorticoids in expression of the adrenergic phenotype in rat embryonic adrenal gland. *Dev. Biol.*, 82, 1-10.
- Bohn, M.C., Goldstein, M.C. and Black, I.B. (1982) Expression of phenylethanolamine N-methyl-transferase in rat sympathetic ganglia and extra-adrenal chromaffin tissue. *Dev. Biol.*, 89, 299-308.

- Bohn, M.C., McEwen, B.S., Luine, V. and Black, I.B. (1984) Development and characterization of glucocorticoid receptors in rat superior cervical ganglion. *Dev. Brain Res.*, 14, 211-218.
- Bohus, B. and De Kloet, E.R. (1981) Adrenal steroids and extinction behaviour : antagonism by progesterone, deoxycorticosterone and dexamethasone of a specific effect of corticosterone. *Life Sci.*, 28, 433-440.
- Booth, R.F.G., Patel, T.B. and Clark, J.B. (1980) The development of enzymes of energy metabolism in the brain of a precocial (guinea pig) and nonprecocial (rat) species. *J. Neurochem.*, 34, 17-25.
- Bottoms, G. and Goetsch, D.D. (1967) Subcellular distribution of the (³H) corticosterone fraction in brain, thymus, heart and liver of the rat. *Proc. Soc. Exp. Biol. Med.*, 124, 662-665.
- Boulton, A.A. (1979) Trace amines in the central nervous system. In "Int. Rev. Biochem. Physiol. Pharmacol. Biochem." Ed. Tipton, K.F., Univ. Park Press, New York, Vol.26, pp. 179-206.
- Boulton, A.A. and Juorio, A.V. (1982) Brain trace amines. In "Handbook of Neurochemistry", Ed. Lajtha, A. Vol.1, pp. 189-222.
- Boulton, A.A. and Wu, P.H. (1973) Biosynthesis of cerebral phenolic amines. II. In vivo regional formation of p-tyramine and octopamine from tyrosine and dopamine. *Can.J.Biochem.*, 51, 428-435.
- Bourgoin, S., Faivre-Bauman, A., Benda, P., Glowinski, J. and Hamon, M. (1974) Plasma tryptophan and 5HT metabolism in the central nervous system of the newborn rat. *J. Neurochem.*, 23, 319-328.
- Bourgoin, H.M., Hery, F. and Simmonet, G. (1978) Phospholipid-induced activation of tryptophan hydroxylase from the rat brain stem. *Biochem. Pharmacol.*, 27, 915-922.
- Bowman, R.E. and Wolf, R.C. (1962) A rapid and specific ultramicromethod for total serum cholesterol. *Clin.Chem.*, 8, 302-309.
- Burdman, J.A., Jahn, G.A. and Szijan, I. (1975) Early events in the effect of hydrocortisone acetate on DNA replication in the rat brain. *J. Neurochem.*, 24, 663-666.
- Butte, J.C., Kakihana, R. and Noble, E.P. (1972) Rat and mouse brain corticosterone. *Endocrinology*, 90, 1091-1100.

- Cake, M.H. and Litwack, G. (1975) The glucocorticoid receptor. In "Biochemical actions of hormones", Vol.3, Ed. Litwack, G., Academic Press, New York, pp. 317-390.
- Cantwell, D.P. (1983) Childhood depression : what do we know, where do we go? In "Childhood psychopathology and development". Eds. Guze, S.B., Earls, F.J. and Burrell, J.E., Ravens Press, New York, pp. 67-85.
- Carlstedt-Duke, J., Okret, S., Wrangé, O. and Gustafsson, J. (1982) Immunochemical analysis of the glucocorticoid receptor : identification of a third domain separate from the steroid-binding and DNA-binding domains. Proc. Natl. Acad. Sci. (USA), 79, 4260-4264.
- Carpenter, W.T. Jr. and Bunney, W.R. Jr. (1971) Adrenal cortical activity in depressive illness. Am. J. Psychiatry, 128, 31-40.
- Casper, R., Vernadakis, A. and Timiras, P.S. (1967) Influence of estradiol and cortisol on lipids and cerebrosides in the developing brain and spinal cord of the rat. Brain Res., 5, 524-526.
- Cavenee, W.K., Jahanston, D. and Melnykovich (1978) Regulation of cholesterol biosynthesis in HeLa S3G cells by serum lipoproteins : dexamethasone mediated interference with suppression of 3-hydroxy-3-methyl-glutaryl coenzyme A reductase. Proc. Natl. Acad. Sci. (USA), 75, 2103-2107.
- Chatterjee, D. and Sarkar, P.K. (1984) Ontogeny of glutamine synthetase in rat brain. Int. J. Dev. Neurosci., 2 : 55-60.
- Ciaranello, R.D. (1978) Regulation of phenylethanolamine N-methyl transferase synthesis and degradation. I. Regulation by rat adrenal glucocorticoids. Mol. Pharmacol., 14, 478-489.
- Ciaranello, R.D., Jacobowitz, D. and Axelrod, J. (1973) Effect of dexamethasone on phenylethanolamine N-methyltransferase in chromaffin tissue of the neonatal rat. J. Neurochem., 20, 799-805.
- Cidlowski, J.A. and Cidlowski, N.B. (1982) Glucocorticoid receptors and the cell cycle : evidence that the accumulation of glucocorticoid receptors during the S phase of the cell cycle is dependent on ribonucleic acid and protein synthesis. Endocrinol., 110, 1653-1662.
- Cohen, D.J., Shaywitz, B.A., Young, J.G. and Bowers, M.B. Jr. (1980) Cerebrospinal fluid monoamine metabolites in neuropsychiatric disorders of childhood. In 'Neurobiology of cerebrospinal fluid', Ed. Wood, J.H. Vol. I, Plenum, New York, Chapter 46.

- Colon, A.D., Plaitakis, A., Perakis, A., Berl, S. and Clarke, D.D. (1986) Purification and characterization of a soluble and a particulate glutamate dehydrogenase from rat brain. *J. Neurochem.*, 46, 1811-1819.
- Cori, C.F. and Cori, G.T. (1927) The fate of sugar in the animal body. VII. The carbohydrate metabolism of adrenalectomized rats and mice. *J. Biol. Chem.*, 74, 473-494.
- Cotterrell, M., Balazs, R. and Johnson, A.L. (1972) Effects of corticosteroids on the biochemical maturation of rat brain : postnatal cell formation. *J. Neurochem.*, 19, 2151-2167.
- Covarrubias, M. and Tapia, R. (1978) Calcium-dependent binding of brain glutamate decarboxylase to phospholipid vesicles. *J. Neurochem.*, 31, 1209-1214.
-
- Coyle, J.T. and Enna, S.J. (1976) Neurochemical aspects of the ontogenesis of GABAergic neurons in the rat brain. *Brain Res.*, 111, 119-123.
- Cremer, J.E., Braun, L.D. and Oldendorf, W.H. (1976) Changes during development in transport processes of the blood brain barrier. *Biochem. Biophys. Acta.*, 448, 633-637.
-
- Curzon, G., Joseph, M.H. and Knott, P.J. (1972) Effects of immobilization and food deprivation on rat brain tryptophan metabolism. *J. Neurochem.*, 19, 1967-1974.
- Cushing, H. (1932) The basophil adenomas of the pituitary body and their clinical manifestations. *Bull. Johns Hopkins Hosp.*, 50, 137-195.
- Cuzner, M.L. and Davison, A.N. (1968) Lipid composition of rat brain and subcellular fractions during development. *Biochem. J.*, 106, 29-34.
-
- Dahlquist, A. and Nordstrom, C. (1966) The distribution of disaccharide activities in the villi and crypts of small intestinal mucosa. *Biochem. Biophys. Acta.*, 113, 624-625.

- David, S. and Kalyankar, G.D. (1986) Effect of adrenalectomy on γ -aminobutyric acid concentrations in the central nervous system. *J. Neurochem.*, 46, 161-165.
- Dawson, G. and Kernes, S.M. (1978) Induction of sulfogalactosylceramide (Sulfatide) synthesis by hydrocortisone (cortisol) in mouse G-26 oligodendrogloma cell strains. *J. Neurochem.*, 31, 1091-1094.
- Dawson, G. and Kernes, S.M. (1979) Mechanism of action of hydrocortisone potentiation of sulfogalactosylceramide synthesis in mouse oligodendrogloma clonal cell lines. *J. Biol. Chem.*, 254, 163-167.
- DeFeudis, F.V. (1984) GABA and endocrine regulation - Relation to neurologic-psychiatric disorders. *Neurochem. Int.*, 6, 1-16.
- DeFiore, C.H. and Turner, B.B. (1983) (^3H) corticosterone binding in the caudate-putamen. *Brain Res.*, 278, 93-101.
- De Kloet, E.R. and Reul, J.M.H.M. (1987) Feedback action and tonic influence of corticosteroids on brain function : a concept arising from the heterogeneity of brain receptor systems. *Psychoneuroendocrin.*, 12, 83-105.
- De Kloet, E.R. and Veldhuis, H.D. (1985) Adrenocortical hormone action. In 'Handbook of Neurochemistry', Ed. Lajtha, A., Pergamon, New York, Vol.8, p. 47-91.
- De Kloet, E.R., Wallach, G. and Mc Ewen, B.S. (1975) Differences in corticosterone and dexamethasone binding in rat brain and pituitary. *Endocrinology*, 96, 598-609.
- De Kloet, E.R., Kovacs, G.L., Szabo, G., Telegdy, G., Bohus, B. and Versteeg, D.H.G. (1982) Decreased serotonin turnover in the dorsal hippocampus of rat brain shortly after adrenalectomy : selective normalization after corticosterone substitution. *Brain Res.*, 239, 659-663.
- De Kloet, R., Versteeg, D.H.G. and Kovacs, G.L. (1983) Aldosterone blocks the response to corticosterone in the raphehippocampal serotonin system. *Brain Res.*, 264, 323-327.
- De Kloet, E.R., Reul, J.M.H.M., de Rondé, F.S.W., Bloemers, M., and Ratka, A. (1986a) Function and plasticity of brain corticosteroid receptor systems : action of neuropeptides. *J. Steroid Biochem.*, 25, 723-731.
- De Kloet, E.R., Sybesma, H. and Reul, J.M.H.M. (1986b) Selective control of serotonin receptor capacity in raphe-hippocampal system. *Neuroendocrinology*, 42, 513-522.
- De Kosky, S., Scheff, S. and Cotman, C. (1984) Elevated corticosterone levels : a possible cause of reduced axon sprouting in aged animals. *Neuroendocrinology*, 38, 33-38.

- Deliconstantinos, G. (1985) Cortisol effect on ($\text{Na}^+\text{+K}^+$) stimulated ATPase activity and on bilayer fluidity of dog brain synaptosomal plasma membranes. *Neurochem. Res.*, 10, 1605-1613.
- Dellorco, R.T. and Melnykovich, G. (1970) Effect of prednisolone on phospholipid metabolism in tissue culture. *Exp. Cell Res.*, 60, 257-261.
- DeLorenzo, R.J. and Dashefsky, L.H. (1985) Anticonvulsants. In 'Handbook of neurochemistry', Vol.9, Ed. Lajtha, A., Plenum Press, New York, pp. 363-403.
- Demediuk, P., Dugan, L., Anderson, D.K., Means, E.D and Horrocks, L.A. (1985) MPSS and membrane properties of neurons in culture. *Trans. Am. Soc. Neurochem.*, 16, 279.
- Demopoulos, H.B., Milvy, P., Kakari, S. and Ransohoff, J. (1972) Molecular aspects of membrane structure in cerebral edema, in steroids and brain edema. Eds. Reulen, H.J. and Schurmann, K. pp. 298-339. Springer-Verlag, New York.
- Denner, L.A. and Wu, J.Y. (1985) Two forms of rat brain glutamic acid decarboxylase differ in their dependence on free pyridoxal phosphate. *J. Neurochem.*, 44, 957-965.
- Dennis, S.C. and Clark, J.B. (1978) The synthesis of glutamate by rat brain mitochondria. *J. Neurochem.*, 31, 673-680.
- Densmore, C.L., Luttge, W.G. and Emadian, S.M. (1984) Effects of metal ions and chelating agents on *in vitro* stability of glucocorticoid receptors in brain cytosol. *Life Sci.*, 35, 2237-2246.
- DeSouza, E.B., Goeders, N. and Kuhar, M.J. (1986) Benzodiazepine receptors in rat brain are altered by adrenalectomy. *Brain Res.*, 381, 176-181.
- De Vellis, J. and English, D. (1973) Age-dependent changes in the regulation of glycerophosphate dehydrogenase in the rat brain and in a glial cell line. In "Neurobiological aspects of maturation and aging". Ed. Ford, D.H., Amsterdam : Elsevier, pp. 321-330.
- Devenport, L.D. and Devenport, J.A. (1983) Brain growth : interactions of maturation with adrenal steroids. *Physiol. Behav.*, 30, 313-315.
- Devenport, L.D. and Devenport, J.A. (1985) Adrenocortical hormones and brain growth : reversibility and differential sensitivity during development. *Exp. Neurol.*, 90, 44-52.
- De Venuto, F. and Chader, G. (1966) Interactions between cortisol and corticosterone and fractions of rat thymus, brain and heart cell. *Biochem. Biophys. Acta.*, 121, 151-158.
- Dickinson, S.L., Kennett, G.A. and Curzon, G. (1985) Reduced 5-hydroxytryptamine-dependent behaviour in rats following chronic corticosterone treatment. *Brain Res.*, 345, 10-18.

- Diez, J.A., Sze, P.Y. and Ginsburg, B.E. (1976) Tryptophan regulation of brain tryptophan hydroxylase. *Brain Res.*, 104, 396-400.
- Diez, J.A., Sze, P.Y. and Ginsburg, B.E. (1977) Effects of hydrocortisone and electric footshock on mouse brain tyrosine hydroxylase activity and tyrosine levels. *Neurochem. Res.*, 2, 161-170.
- Dunn, A.J., Gildersleeve, N.B. and Gray, H.E. (1978) Mouse brain tyrosine hydroxylase and glutamic acid decarboxylase following treatment with adrenocorticotrophic hormone, vasopressin or corticosterone. *J. Neurochem.*, 31, 977-982.
- Dye, D.J. and Taberner, P.V. (1975) The effect of newer anaesthetics on the *in vitro* activity of glutamate decarboxylase and GABA-transaminase in crude brain extracts and on the levels of amino acids *in vivo*. *J. Neurochem.*, 125, 997-1003.
- Edmond, J. (1974) Ketone bodies as precursors of sterols and fatty acids in the developing rat. *J. Biol. Chem.*, 249, 72-80.
- Edwards, P.A. (1973) Effect of adrenalectomy and hypophysectomy on the circadian rhythm of β -hydroxy- β -methyl glutaryl coenzyme - A reductase activity in rat liver. *J. Biol. Chem.*, 248, 2912-2917.
- Edwards, P.M. and Rousseau, G.G. (1980) Effects of adrenalectomy and corticosteroids on three enzymes involved in amino acid metabolism in the brain of adult and newborn rats. *J. Steroid Biochem.*, 13, 567-569.
- Eisenstein, A.B., Spencer, S., Flatness, S. and Brodsky, A. (1966) Carbohydrate synthesis in the isolated perfused rat liver: role of the adrenal cortex. *Endocrinology*, 79, 182-186.
- Eisenstein, A.B. and Strack, J. (1968) Effects of glucagon on carbohydrate synthesis and enzyme activity in rat liver. *Endocrinology*, 83, 1337-1348.
- Elekes, J., Patthy, A., Lang, T. and Palkovits, M. (1986) concentrations of GABA and glycine in discrete brain nuclei. *Neuropharmacology*, 25, 703-709.
- Ennaceur, A., Coulon, J.F., Delacour, J. and David, J.C. (1986) High sensitivity of brain octopamine levels to stress. *Psychopharmacology*, 88, 305-309.
- Eranko, L. and Eranko, O. (1972) Effect of hydrocortisone on histochemically demonstrable catecholamines in the sympathetic ganglia and extraadrenal chromaffin tissue of the rat. *Acta Physiol. Scand.*, 84, 125-133.

- Eranko, O. and Soinila, S. (1981) Effects of early postnatal division of the post ganglionic nerves on the development of principal cells and small intensity fluorescent cells in the rat superior cervical ganglion. *J. Neurocytol.*, 10, 1-18.
- Fain, J.N., Kovacev, V.P. and Scow, R.O. (1965) Effect of growth hormone and dexamethasone on lipolysis and metabolism in isolated fat cells of the rat. *J. Biol. Chem.*, 240, 3522-3529.
- Farber, S. and Ciechanover (1986) Transfer RNA is required for conjugation of ubiquitin to selective substrates of the ubiquitin and ATP-dependent proteolytic system. *J. Biol. Chem.*, 261, 3128-3134.
- Feldman, S. and Sarne, Y. (1970) Effect of cortisol on single cell activity in hypothalamic islands. *Brain Res.*, 23, 67-75.
- Folch, J., Lees, M. and Sloane-Stanely, G.H. (1957) A simple method for the isolation and purification of total lipids from animal tissues. *J. Biol. Chem.*, 226, 497-509.
- Forsham, P.H. (1962) The adrenals. In "Textbook of endocrinology". Ed. Williams, R.H. 3rd ed. Philadelphia, Saunders.
- Fuxe, K., Hokfelt, T., Jonsson, G., Levine, S., Lidbrink, P. and Lofstrom, A. (1973) Brain and pituitary-adrenal interactions. Studies on central monoamine neurons. In "Brain-pituitary-adrenal Interrelationships". Eds. Brodish, A. and Redgate, E.S., Basel: Karger, pp. 239-269.
- Fuxe, K., Harfstrand, A., Agnati, J.A., Yu, Z.Y., Cintra, A., Wikstrom, A., Okret, S., Cantoni, E. and Gustafsson, J.A. (1985a) Immunocytochemical studies on the localization of glucocorticoid receptor immunoreactive nerve cells in the lower brain stem and spinal cord of the male rat using a monoclonal antibody against rat liver glucocorticoid receptor. *Neurosci. Lett.*, 60, 1-6.
- Fuxe, K., Wikstrom, A., Okret, S., Agnati, J.A., Harfstrand, A., Yu, Z.Y., Granholm, L., Zoli, M., Vale, W. and Gustafsson, J.A. (1985b) Mapping of glucocorticoid receptor immunoreactive neurons in the rat tel- and diencephalon using a monoclonal antibody against rat liver glucocorticoid receptor. *Endocrinol.*, 117, 1803-1812.
- Gibson, C.J. (1985) Control of monoamine synthesis by precursor availability. In 'Handbook of neurochemistry'. Ed. Lajtha, A. Vol.8, Plenum Press, New York, pp.309-324.

- Glowinski, J. and Iversen, L.L. (1966) Regional studies of catecholamines in rat brain, the disposition of H^3 -norepinephrine H^3 -dopamine and H^3 -DOPA in various regions of rat brain. *J. Neurochem.*, 13, 656-659.
- Goeders, N.E., De Souza, E.B. and Kuhar, M.J. (1986) Benzodiazepine receptor GABA ratios : regional differences in rat brain and modulation by adrenalectomy. *Eur. J. Pharmacol.*, 129, 363-366.
- Goldstein, L., Stella, E.J. and Knox, W.E. (1962) The effect of hydrocortisone on tyrosine- α -ketoglutarate transaminase and tryptophan pyrrolase activities in the isolated, perfused rat liver. *J. Biol. Chem.*, 237, 1723-1726.
- Gottesfeld, Z., Kvetnasky, R., Kopin, I.J. and Jacobowitz, D.M. (1978) Effects of repeated immobilization stress on glutamate decarboxylase and choline acetyltransferase in discrete brain regions. *Brain Res.*, 152, 374-378.
- Granich, M. and Timiras, P.S. (1971) Mechanism of cortisol in maturation of brain lipid patterns in embryonal and young chicks. In "Hormones in development". Eds. Hamburg, M. and Barrington, E.J.W. Appleton-Century-Crofts, New York, pp. 213-219.
- Green, S. and Chambon, P. (1987) A superfamily of potentially oncogenic hormone receptors. *Nature*, 324, 615-617.
- Green, A.R. and Curzon, G. (1975) Effects of hydrocortisone and immobilization on tryptophan metabolism in brain and liver of rats of different ages. *Biochem. Pharmacol.*, 24, 713-716.
- Green, A.R. and Grahame-Smith, D.G. (1975) 5-hydroxytryptamine and other indoles in the central nervous system. In "Handbook of Psychopharmacology" Vol. 3, Ed. Iversen, L.L., Iversen, S.D. and Snyder, S.H. Plenum Press, New York, pp. 169-245.
- Green, A.R., Sourkes, T.L. and Young, S.N. (1975a) Liver and brain tryptophan metabolism following hydrocortisone administration to rats and gerbils. *Br. J. Pharmacol.*, 53, 287-292.
- Green, A.R., Woods, H.F., Knott, P.J. and Curzon, G. (1975b) Factors influencing effect of hydrocortisone on rat brain tryptophan metabolism. *Nature*, 255, 170.
- Grosser, B.I., Stevens, W. and Reed, D.J. (1971) Corticosterone binding by rat brain cytosol. *J. Neurochem.*, 18, 1725-1732.
- Gumbinas, M., Oda, M. and Huttenlocher, P. (1973) The effect of corticosteroids on myelination of the developing rat brain. *Biol. Neonate*, 22, 355-366.
- Gwynne, J.T., Mahaffee, D., Brewer, H.W. and Ney, R.L. (1976) Adrenal cholesterol uptake from plasma lipoproteins regulation by corticotropin. *Proc. Natl. Acad. Sci. (USA)*, 73, 4329-4333.

- Haefely, W., Kyburz, E., Gerecke, M. and Mohler, H. (1985) Recent advances in the molecular pharmacology of benzodiazepine receptors. *Adv. Drug Res.*, 14, 165-322.
- Hall, E.D. and Braughler, J.M. (1982) Effects of intravenous methylprednisolone on spinal cord lipid peroxidation and $(\text{Na}^+, \text{K}^+)$ -ATPase activity. Dose response analysis during 1st hour contusion injury in the cat. *J. Neurosurg.*, 49, 563-568.
- Hall, E.D. and McGinley, P.A. (1982) Effects of a single intravenous glucocorticoid dose on biogenic amine levels in cat lambar spinal cord. *J. Neurochem.*, 38, 1787-1790.
- Hallermayer, K., Harmening, C. and Hamprecht, B. (1981) Cellular localization and regulation of glutamine synthetase in primary cultures of brain cells from newborn mice. *J. Neurochem.*, 37, 43-52.
- Hamamura, M., Shibuki, K. and Yagi, K. (1984) Noxious inputs to supraoptic neurosecretory cells in the rat. *Neurosci. Res.*, 2, 49-61.
- Hanaway, J. (1967) Formation and differentiation of the external granular layer of the chick cerebellum. *J. Comp. Neurol.*, 131, 1-14.
- Hanbauer, I., Guidotti, A. and Costa, E. (1975) Dexamethasone induces tyrosine hydroxylase in sympathetic ganglia but not in adrenal medulla. *Brain Res.*, 85, 527-531.
- Hansson, E. (1986) Primary cultures from defined brain areas. III. Effects of seeding time on (^3H) -glutamate transport and glutamine synthetase activity. *Dev. Brain Res.*, 24, 203-209.
- Hare, T.A. and Wood, J.H. (1985) Pathological neurochemistry of cerebrospinal fluid : Neurotransmitter and neuropeptides. In 'Handbook of neurochemistry', Vol. 10, Ed. Lajtha, A. Plenum Press, New York, pp. 421-447.
- Harris, J., Davis, B.A., Krahenbuhl, G.S. and Boulton, A.A. (1985) Trace amines/metabolite responses in stress. In "Neuro-psychopharmacology of the trace amines". Eds. Boulton, A.A. Maitre, L., Bieck, P.R. and Reiderer, P. The humana Press, Inc., Clifton, New Jersey, pp. 395-406.
- Havoundjian, H., Paul, S.M. and Skolnick, P. (1986) Rapid, stress-induced modification of the benzodiazepine receptor-coupled chloride ionophore. *Brain Res.*, 375, 401-406.
- Hawkins, R.A. and Blebueck, J.K. (1979) Ketone bodies are selectively used by individual brain regions. *Science*, 205, 325-327.

- Hawkins, R.A., Williamson, D.H. and Krebs, H.A. (1971) Ketone-body utilization by adult and suckling rat brain in vivo. *Biochem. J.*, 122, 13-18.
- Haydon, P.G., Mc Cobb, D.P. and Kater, S.B. (1984) Serotonin selectively inhibits growth cone motility and synaptogenesis of specific identified neurones. *Science*, 226, 561-564.
- Haynes, R.C. Jr. and Murad, F. (1980) Adrenocorticotrophic hormone; adrenocortical steroids and their synthetic analogs; inhibitors of adrenocortical steroid biosynthesis. In "The Pharmacological basis of Therapeutics", Eds. Goodman, A., Goodman, L.S. and Gilman, A., Macmillan Publ. Inc., N.Y., 1466-1496.
- Haynes, R.C. Jr., Koritz, S.B. and Peron, F.G. (1959) Influence of adenosine 3',5'-monophosphate on corticoid production by rat adrenal glands. *J. Biol. Chem.*, 234, 1421-1423.
- Hays, A.P. and Hill, R.B. (1960) Enzymes of lipid synthesis in the liver of the corticosterone-treated rat. *Biochem. Biophys. Acta.*, 98, 646-648.
- Hellman, L.F., Nakada, J. and Weitzman, E.D. (1970) Cortisol is secreted episodically by normal man. *J. Clin. Endocrinol. Metab.*, 30, 411-422.
- Hench, P.S., Kendall, E.C., Slocumb, C.H. and Dolley, H.F. (1949) The effect of a hormone of the adrenal cortex (17-hydroxy-11-dehydrocorticosterone; compound E) and of pituitary adrenocorticotrophic hormone on rheumatoid arthritis. *Proc. Staff Meet. Mayo Clin.*, 24, 181-197.
- Henning, S. (1978) Plasma concentrations of total and free corticosterone during development in the rat. *Am.J.Physiol.*, 235, 451-456.
- Hiller, J., Hiller, J.G. and Reetfern, P.H. (1975) Liver tryptophan pyrrolase activity and metabolism of brain 5HT in rat. *Nature*, 253, 566-567.
- Hirata, F., Schiffman, E., Venkatasubramanian, K., Salomon, D. and Axelrod, J. (1980) A phospholipase A₂ inhibitory protein in rabbit neutrophils induced by glucocorticoids. *Proc. Natl. Acad. Sci. (USA)*, 77, 2533-2536.
- Hollenberg, S.M., Weinberger, C., Ong, E.S., Cerelli, G., Oro, A., Lebo, R., Thompson, E.R., Rosenfeld, M.S. and Evans, R.M. (1985) Primary structure and expression of a functional human glucocorticoid receptor DNA. *Nature*, 318, 635-641.
- Horner, H.C., Munck, A. and Lienhard, G.E. (1987) Dexamethasone causes translocation of glucose transporters from the plasma membrane to an intracellular site in human fibroblasts. *J. Biol. Chem.*, 262, 17696-17702.

- Horowitz, A.J. and Schanberg, S.M. (1979) Hormonal effects on the development of rat brain gangliosides. I. Cortisol. *Biochem. Pharmacol.*, 28, 881-895.
- Horrocks, L.A. and Harder, H.W. (1983) Fatty acids and cholesterol. In 'Handbook of neurochemistry', Ed. Lajtha, A. Plenum Press, New York, pp. 1-16.
- Horrocks, L.A. and Sun, G.Y. (1972) Ethanolamine plasmalogens. In "Research methods in Neurochemistry", Vol. I, Eds. Marks, N. and Rodnight, R., Plenum Press, New York, pp. 223-231.
- Housley, P.R., Grippo, J.F., Dahmer, M.K. and Pratt, W.B. (1984) Inactivation, activation and stabilization of glucocorticoid receptor. In "Biochemical actions of hormones", Vol. 11, Ed. Litwack, G., Academic Press, New York, pp. 347-356.
- Howard, E. (1965) Effects of corticosterone and food restriction on growth and on DNA, RNA and cholesterol contents of the brain and liver of infant mice. *J. Neurochem.*, 12, 181-191.
- Howard, E. (1974) Hormonal effects on the growth and DNA content of the developing brain. In "Biochemistry of developing brain", Vol. 2, Ed. Himwich, W., New York: Dekker, pp. 1-68.
- Howard, E. and Benzamins, J.A. (1975) DNA, ganglioside and sulfatide in brains of rats given corticosterone in infancy with an estimate of cell loss during development. *Brain Res.*, 92, 73-87.
- Inagaki, T., Appaji Rao, N. and Yagi, K. (1986) Modulation by phospholipids of the activity of monoamine oxidase purified from pig liver. *J. Biochem.*, 100, 597-603.
- Itoh, T. and Quastel, J.H. (1970) Acetoacetate metabolism in infant and adult rat brain in vitro. *Biochem. J.*, 116, 641-655.
- Iuvone, P.M., Morasco, J. and Dunn, A.J. (1977) Effect of corticosterone on the synthesis of (³H) catecholamines in the brains of CD-1 mice. *Brain Res.*, 120, 571-576.
- Iversen, L.L. (1973) Neuronal and extraneuronal catecholamine uptake mechanisms. "Frontiers in catecholamine research". Eds. Usdin, E. and Snyder, S.H., New York: Pergamon, pp. 403-408.
- Iversen, L.L. and Salt, P.J. (1970) Inhibition of catecholamine uptake by steroids in the isolated heart. *Brit. J. Pharmacol.*, 40, 528-530.
- Javoy, F., Glowinski, J. and Kordon, C. (1968) Effects of adrenalectomy on the turnover of norepinephrine in the rat brain. *Eur. J. Pharmacol.*, 4, 103-104.

- Jhanwar-Uniyal, M., Roland, R. and Leibowitz, S. (1986) Diurnal rhythm of L₂-noradrenergic receptors in the paraventricular nucleus and other brain areas: relation to circulating corticosterone and feeding behavior. *Life Sci.*, 38, 473-482.
- Jones, M.T., Hillhouse, E.W. and Burden, J. (1976) Mechanism of action of fast and delayed corticosteroid feedback at the hypothalamus. *J.Endocrinol.*, 69, 34-35.
- Joseph, M.H., Young, S.N. and Curzon, G. (1976) The metabolism of a tryptophan load in rat brain and liver. The influence of hydrocortisone and allopurinol. *Biochem.Pharmacol.*, 25, 2599-2604.
- Juliet, J. (1988) Effects of variation in fats and protein levels of the maternal diet on the blood levels of ketone bodies and cerebral ketone metabolizing enzymes in the offsprings of rat. M.Phil thesis submitted to M.S.University of Baroda, Baroda, India.
- Juorio, A.V. (1979) Effect of stress and L-DOPA administration on mouse striatal tyramine and homovanillic acid levels. *Brain Res.*, 179, 186-189.
- Juorio, A.V. (1982) A possible role for tyramines in brain function and some mental disorders. *Gen. Pharmacol.*, 13, 181-183.
- Juorio, A.V. (1984) Drug-induced changes in the central metabolism of tyramine and other trace monoamines: their possible role in brain functions. In "Neurobiology of the Trace amine". Eds. Boulton, A.A., Baker, G.B., Dewhurst, W.G. and Sandler, M. The Humana Press, New Jersey, pp. 145-162.
- Juorio, A.V. and Kazakoff, C.W. (1984) The presence of B-phenylethylamine, p-tyramine, m-tyramine and tryptamine in ganglia and foot muscle of the garden snail (*Helix aspersa*). *Experientia*, 40, 549-551.
- Juorio, A.V., Greenshaw, A.J. and Boulton, A.A. (1985) Possible pathways for some traceamine - containing neurons. In "Neuropsychopharmacology of the traceamines".

- Eds. Boulton, A.A., Maitre, L., Bieck, P.R. and Reiderer, P. The humana Press, Inc., Clifton, New Jersey, pp. 87-162.
- Kabara, J.J. (1973) A critical review of brain cholesterol metabolism. *Prog. Brain Res.*, 40, 363-382.
- Kamal, L.A., Arbilla, S. and Langer, S.Z. (1981) Presynaptic modulation of the release of dopamine from the rabbit caudate nucleus : differences between electrical stimulation, amphetamine and tyramine. *J. Pharmacol. Exp. Ther.*, 216, 592-598.
- Kendall, D.A., Mc Ewen, B.S. and Enna, S.J. (1982) The influence of ACTH and corticosterone on (³H) GABA receptor binding in rat brain. *Brain Res.*, 236, 365-374.
- Kennett, G.A. and Joseph, M.H. (1981) The functional importance of increased brain tryptophan in the serotonergic response to restraint stress. *Neuropharmacology*, 20, 39-43.
- Kennett, G.A., Curzon, G., Hunt, A. and Patel, A.J. (1986) Immobilization decreases amino acid concentrations in plasma but maintains or increases them in brain. *J. Neurochem.*, 46, 208-212.
- Kenney, F.T. (1970) Hormonal regulation of synthesis of liver enzymes. In "Mammalian protein metabolism", Vol. IV, Ed. Munro, H.N., Academic Press, New York, pp. 131-177.
- King, R.J.B. (1987) Structure and function of steroid receptors. *J. Endocr.*, 114, 341-349.
- Kizer, J.S., Palkovits, M., Zivin, J., Brownstein, J.M., Saavedra, M. and Kopin, J.J. (1974) The effect of endocrinological manipulations on tyrosine hydroxylase and dopamine- β -hydroxylase activities in individual hypothalamic nuclei of the adult male rat. *Endocrinology*, 95, 799-812.
- Klee, C.B. and Sokoloff, L. (1967) Changes in D(-)-3-hydroxybutyric dehydrogenase activity during brain maturation in the rat. *J. Biol. Chem.*, 242, 3880-3883.
- Koch, B., Lutz-Bucher, B., Briaud, B. and Mialhe, C. (1976) Heterogeneity of pituitary binding : evidence for a transcortin like compound. *Biochem. Biophys. Acta.*, 444 : 497-507.
- Koch, B., Sakly, M., Lutz-Bucher, B. (1981) Modulation by transcortin-like binding sites of uptake and distribution of glucocorticoids by dispersed pituitary cells. *Mol. Cell Endocrinol.*, 22, 169-178.

- Kononenko, V. Ya. and Mishunina, T.M. (1982) Effect of hydrocortisone on gamma-aminobutyric acid content and glutamate decarboxylase activity in rat brain regions. *Ukrain. J. Biochem.*, 54, 31-35.
- Koper, J.W., Lopes, Cardozo, M. and Van Golde, M.G. (1981) Preferential utilization of ketone bodies for the synthesis of myelin cholesterol in vivo. *Biochem. Biophys. Acta.*, 666, 411-417.
- Kovacs, S. (1973) The role of thyroid and adrenocortical hormones in the biochemical maturation of the rat brain. In "Hormones and brain function", Ed. Lissak, K., Plenum Press, New York, pp. 53-67.
- Kovacs, G., Koshonti, J., Lissak, K. and Telegdy, G. (1977) Dose dependent dual effect of corticosterone on cerebral 5HT metabolism. *Neurochem. Res.*, 2, 311-322.
- Kreutner, W. and Goldberg, N.D. (1967) Dependence on insulin of the apparent hydrocortisone activation of hepatic glycogen synthetase. *Proc. Natl. Acad. Sci. (USA)*, 58, 1515-1519.
- Krieger, D. (1982) Cushing's syndrome. *Monogr. Endocrinol.*, Vol.22, pp. 142, Pub. Springer-Verlag, Berlin.
- Krozowski, Z.S. and Funder, J.W. (1983) Renal mineralocorticoid receptors and hippocampal corticosterone binding species have identical intrinsic steroid specificity. *Proc. Natl. Acad. Sci. (USA)*, 80, 6056-6060.
- Kuriyama, K., Siskin, B., Ito, J., Simonsen, D.G., Haber, B., and Roberts, E. (1968) The γ -aminobutyric acid system in the developing chick embryo cerebellum. *Brain Res.*, 11, 412-430.
- Kwok, R.P.S. and Jurio, A.V. (1986) Concentration of striatal tyramine and dopamine metabolism in diabetic rats and effect of insulin administration. *Neuroendocrinology*, 43, 590-596.
- Lai, J.C.K. and Clark, J.B. (1976) Preparation and properties of mitochondria derived from synaptosomes. *Biochem. J.*, 154, 423-432.
- Lalitha, T. (1988). Studies on the interaction of maternal alcohol consumption and the protein deficiency on the rat CNS lipids. Ph.D. thesis submitted to M.S. University, Baroda, India.
- Lambert, J.J., Peters, J.A. and Cottrell, G.A. (1987) Actions of synthetic and endogenous steroids on the GABA_A receptor. *Trends. Pharmaceut. Sci.*, 8, 224-227.
- Lanier, L.P., Dunn, A.J. and Hartesveldt, C.V. (1976) Development of neurotransmitters and their function in brain. In "Reviews of Neuroscience", Vol.2, Eds. Ehrenpreis, S. and Kopin, I.J., Raven Press, New York, pp. 195-358.

- Land, J.M., Booth, R.F.G., Berger, R. and Clark, J.B. (1977) Development of mitochondrial energy metabolism in rat brain. *Biochem. J.*, 164, 339-348.
- Landfield, P., Baskin, R. and Pifler, T. (1981) Brain aging correlates : Retardation by hormonal-pharmacological treatments. *Science*, 214, 581-584.
- Landgraf, R., Mitro, A. and Hess, J. (1978) Regional net uptake of ^{14}C -glucose by rat brain under the influence of corticosterone. *Endocrinol. Exp.*, 12, 119-128.
-
- Lavielle, S., Tassin, J.P., Thierry, A.M., Blanc, G., Herve, D., Barthelemy, C. and Glowinski, J. (1979) Blockade by benzodiazepines of the selective high increase in dopamine turnover induced by stress in mesocortical dopaminergic neurons of the rat. *Brain Res.*, 168, 585-594.
- Lempinen, M. (1964) Extra-adrenal chromaffin tissue of the rat and the effect of cortical hormones on it. *Acta Physiol. Scand. Suppl.*, 231, 1-91.
- Lengvari, I., Branch, B.J. and Taylor, A.N. (1980) Effects of perinatal thyroxine and/or corticosterone treatment on the ontogenesis of hypothalamic and mesencephalic norepinephrine and dopamine content. *Dev. Neurosci.*, 3, 59-65.
- Leong, S.F. and Clark, J.B. (1984a) Regional development of glutamate dehydrogenase in the rat brain. *J. Neurochem.*, 43, 106-111.
- Long, S.F. and Clark, J.B. (1984b) Regional enzyme development in rat brain : enzymes of energy metabolism. *Biochem. J.*, 218, 139-145.
- Lin, R.C. and Snodgrass, P.J. (1982) Effect of dexamethasone on 3-hydroxy-3-methyl-glutaryl coenzyme A reductase activity and cholesterol synthesis in rat liver. *Biochem. Biophys. Acta.*, 713, 240-250.
- Lisy, V., Stastney, F., Rychter, Z. and Lodin, Z. (1980) Differential effect of cortisol on sodium-potassium adenosine triphosphatase in brain and choroid plexus of developing chick embryo. In "Ontogenesis of the brain", Vol. 3, Eds. Trojan, S. and Stastney, F., Universifas Carolifa, Praga, pp. 49-57.
- Long, C.N.H., Katzin, B. and Fry, E.G. (1940) Adrenal cortex and carbohydrate metabolism. *Endocrinology*, 26, 309-344.

- Long, J.B., Youngblood, W.W. and Kizer, J.S. (1983) Effects of castration and adrenalectomy on in vitro rates of tryptophan hydroxylation and levels of serotonin in microdissected brain nuclei of adult male rats. *Brain Res.*, 277, 289-297.
- Lopes-Cárdozo, M., Larson, O.M. and Schousboe, A. (1986) Acetoacetate and glucose as lipid precursors and energy substrates in primary cultures of astrocytes and neurons from mouse cerebral cortex. *J. Neurochem.*, 46, 773-778.
- Lowry, O.H., Rosebrough, N.J., Farr, A.L. and Randall, R.J. (1951) Protein measurement with the folin phenol reagent. *J. Biol. Chem.*, 193, 265-275.
- Magarinos, A.M., Coirini, H., De Nicola, A.F. and Mc Ewen, B.S. (1986) Mineralocorticoid regulation of salt intake is preserved in hippocampectomized rats. *Neuroendocrinology*, 44, 494-497.
- Mahaffee, D., Reifz, R.C. and Ney, R.L. (1974) The mechanism of action of adrenocorticotrophic hormone. The role of mitochondrial cholesterol accumulation in the regulation of steroidogenesis. *J. Biol. Chem.*, 249, 227-233.
- Maitre, M., Ossola, L. and Mandel, P. (1979) GABA-transaminase of mammalian brain. In "GABA-Biochemistry and CNS functions", Eds. Mandel, P. and De Feudis, F.V., Plenum Press, New York, pp. 3-20.
- Majewska, M.D., Bisslerbe, J.C. and Eskay, R.L. (1985) Glucocorticoids are modulators of GABA_A receptors in brain. *Brain Res.*, 339, 178-182.
- Majewska, M.D., Harrison, N.L., Schwartz, R.D., Barker, J.L. and Paul, S.M. (1986) Steroid hormone metabolites are barbiturate-like modulators of the GABA receptor. *Science*, 232, 1004-1007.
- Manchester, K.L. (1970) Sites of hormonal regulation of protein metabolism. In "Mammalian protein metabolism", Vol. IV, Ed. Munro, H.N., New York, Academic Press, pp. 229-298.
- Mandelbrod, I., Feldman, S. and Werman, R. (1974) Inhibition of firing is the primary effect of microelectrophoresis of cortisol to units in the rat tuberal hypothalamus. *Brain Res.*, 80, 303-315.
- Manev, H. and Pericic, D. (1983) Hypothalamic GABA system and plasma corticosterone in ether stressed rats. *Pharma. Biochem. and Behavior*, 18, 847-850.
- Manev, H. and Pericic, D. (1985) Hypophysial GABA after ether stress, dexamethasone or inhibition of GABA catabolism. *Pharma. Biochem. and Behavior*, 23, 697-700.

- Mans, A.M., Saunder, S.J., Kirsch, R.F. and Biebuyck, J.F. (1979) Correlation of plasma and brain amino acid and putative neurotransmitter alterations during acute hepatic coma in the rat. *J. Neurochem.*, 32, 285-292.
- Markey, K.A., Towle, A.C. and Sze, P.Y. (1982) Glucocorticoid influence on tyrosine hydroxylase activity in mouse locus coeruleus during postnatal development. *Endocrinology*, 111, 1519-1523.
- Mc Ewen, B.S., Weiss, J.M. and Schwartz, L.S. (1969) Uptake of corticosterone by rat brain and its concentration by certain limbic structures. *Brain Res.*, 16, 227-241.
- Mc Ewen, B.S., Magnus, C. and Wallach, G. (1972) Soluble corticosterone-binding macromolecules extracted from rat brain. *Endocrinology*, 90, 217-226.
- Mc Ewen, B.S., De Kloet, E.R. and Rostene, W. (1986a) Adrenal steroid receptors and actions in the nervous system. *Physiol. Rev.*, 66, 1121-1188.
- Mc Ilwain, H. and Bachelard, H.S. (1985) *Biochemistry and the central nervous system*. Churchill Livingstone, New York.
- Mc Kenne, C.T., Timiras, P.S. and Quay, W.B. (1966) Concentrations of 5-hydroxytryptamine in rat brain and pineal after adrenalectomy and cortisol administration. *Neuroendocrinology*, 1, 251-256.
- Mc Knight, G.S. and Palmiter, R.D. (1979) Transcriptional regulation of the ovalbumin and conalbumin genes by steroid hormones in chick oviduct. *J. Biol. Chem.*, 254, 9050-9058.
- Mc Quade, P.S. and Jurio, A.V. (1982) The effects of the administration of β -phenylethylamine as tyramine metabolism. *Eur. J. Pharmac.*, 83, 277-282.
- Meaney, M.J., Sapolsky, R.M. and Mc Ewen, B.S. (1985a) The development of glucocorticoid receptor system in the rat limbic brain. II. An autoradiographic study. *Dev. Brain Res.*, 18, 165-168.
- Meaney, M.J., Sapolsky, R.M., Aitken, D.H. and Mc Ewen, B.S. (1985b) (^3H) Dexamethasone binding in the limbic brain of the fetal rat. *Dev. Brain Res.*, 23, 297-300.
- Meaney, M.J., Aitken, D.H., Van Barkel, C., Bhatnagar, S. and Sapolsky, R.M. (1988) Effect of neonatal handling on age-related impairments associated with the hippocampus. *Science*, 239, 766-768.

- Mersmann, H.J. and Segal, H.L. (1969) Glucocorticoid control of the liver glycogen synthetase-activating system. *J. Biol. Chem.*, 244, 1701-1704.
- Meyer, J.S. (1983) Early adrenalectomy stimulates subsequent growth and development of the rat brain. *Exp. Neurol.*, 82, 432-446.
- Meyer, J.S. (1985) Biochemical effects of corticoids on neural tissues. *Pharmacol. Rev.*, 65, 946-1020.
- Meyer, J.S. and Fairman, K.R. (1985) Early adrenalectomy increases myelin content of the rat brain. *Dev. Brain Res.*, 17, 1-9.
- Meyer, J.S., Luine, V.N., Khylichevskaya, R.I. and Mc Ewen, B.S. (1979). Glucocorticoids and hippocampal enzyme activity. *Brain Res.*, 166, 172-175.
- Micco, D.J., Mc Ewen, B.S. and Shein, W. (1979) Modulation of behavioral inhibition in appetitive extinction following manipulation of adrenal steroids in the rat : implication for involvement of the hippocampus. *J. Comp. Physiol. Psychol.*, 93, 323-329.
- Micheau, J., Destrade, C. and Soumireu-Mourat, B. (1985) Time dependent effects of posttraining intrahippocampal injections of corticosterone on retention of appetitive learning tasks in mice. *Eur. J. Pharmacol.*, 106, 39-46.
- Miesfeld, R., Okret, S., Wilkstorm, A.R., Wrange, O., Gustafsson, J.A. and Yamamoto, K.R. (1984) Characterization of a steroid hormone receptor gene and mRNA in wild type and mutant cells. *Nature*, 312, 779-781.
- Miesfeld, R., Godowski, P.J., Maler, B.A. and Yamamoto, K.R. (1987) Glucocorticoid receptor mutants that define a small region sufficient for enhancer activation. *Science*, 236, 423-427.
- Milkovic, S. and Milkovic, K. (1972) Responsiveness of the pituitary-adrenocortical system during embryonic and early postnatal periods of life. In "Physiology and pathology of adaptive mechanisms", Ed. Bajusz, S. Pergamon Press, Oxford, pp. 28-47.
- Millard, S.A., Costa, E. and Gol, E.M. (1972) On the control of brain serotonin turnover rate by end product inhibition. *Brain Res.*, 40, 545-551.
- Miller, A., Chaptal, C., Mc Ewen, B.S. and Peck, E.J.J. (1978a) Modulation of the affinity GABA uptake into hippocampal ^{high} synaptosomes by glucocorticoids. *Psychoneuroendocrinology*, 3, 155-164.
- Miller, L.P., Martin, D.L., Mazumder, A. and Walters, J.R. (1978b) Studies on the regulation of GABA synthesis : substrate-promoted dissociation of pyridoxal 5'-phosphate from GAD. *J. Neurochem.*, 30, 361-369.

- Miller, L.G., Greenblatt, D.J., Barnhill, J.G., Thompson, M.L. and Shaderh, R.J. (1988) Modulation of benzodiazepine receptor binding in mouse brain by adrenalectomy and steroid replacement. *Brain Res.*, 446, 314-320.
- Mishunina, T.M. and Kononenko, V. Ya, (1983) Glutamate decarboxylase activity in the pituitary in the presence of a change in the corticotropin level in the rat organism. *Problemy Endokrinologii*, 29, 72-75.
- Mitropoulos, K.A. and Balasubramaniam, S. (1976) The role of glucocorticoids in the regulation of the diurnal rhythm of hepatic β -hydroxy- β -methylglutaryl-CoA reductase and cholesterol-7- α -hydroxylase. *Biochem.J.*, 160, 49-55.
- Moberg, S.P., Scapagnani, V., De Groot, J., Ganony, W.F. (1971) Effect of sectioning the fornix on diurnal fluctuation in plasma corticosterone levels in the rat. *Neuroendocrinology*, 7, 11-15.
- Moscana, A.A. and Piddington, R. (1966) Stimulation by hydrocortisone of premature changes in the developmental pattern of glutamine synthetase in embryonic retina. *Biochem. Biophys. Acta.*, 121, 409-411.
- Moscana, A.A. and Piddington, R. (1967) Regulatory mechanisms in the induction of glutamine synthetase in the embryonic retina : immunochemical studies. *Dev. Biol.*, 28, 229-241.
- Munck, A., Guyre, P.M. and Holbrook, N.J. (1984) Physiological functions of glucocorticoids in stress and their relation to pharmacological actions. *Endocrinol. Rev.*, 5, 25-44.
- Nakanishi, S., Kita, T., Taii, S., Imura, H. and Numa, S. (1977) Glucocorticoid effect on the level of corticotropin messenger RNA activity in rat pituitary. *Proc. Natl. Acad. Sci. (USA)*, 74, 3283-3286.
- Nathanielez, P.W. (1976) Fetal endocrinology, an experimental approach. pp. 151-175, North-Holland Publ. Co., Amsterdam.
- Neckers, L. and Sze, P.Y. (1975) Regulation of 5-hydroxytryptamine metabolism in mouse brain by adrenal glucocorticoids. *Brain Res.*, 93, 123-132.
- Neskovic, N.M., Sarlieve, L., Nussbaum, J.L., Kostic, D.M. and Mandel, P. (1972). Quantitative thin layer chromatography of glycolipids in animal tissues. *Clin Acta.*, 38, 147-153.

- Nomura, Y., Komori, T., Okuda, S. and Segawa, T. (1979) Developmental changes in striatal concentration of homovanillic acid and 3,4-dihydroxyphenylacetic acid in response to apomorphine and haloperidol treatment. *Arch. Int. Pharmacodyn.*, 237, 25-30.
- Norton, W.T. (1977) Isolation and characterization of myelin. In "Myelin". Ed. Morell, P. Plenum Press, New York, pp. 373-413.
- Oja, S.S. (1960) Postnatal changes in the concentration of nucleic acids, nucleotides and amino acids in the rat brain. *Ann. Acad. Sci. Fenn. (Med)*, 131, 7-81.
- Oldenberg, V. and Van Golde, L.M.G. (1977) The enzymes of phosphatidylcholine biosynthesis in the fetal mouse lung : effects of dexamethasone. *Biochem. Biophys. Acta.*, 489, 454-465.
- Olpe, H.R. and Mc Ewen, B.S. (1976) Glucocorticoid-binding to receptor-like protein in rat brain and pituitary : ontogenetic and experimentally induced changes. *Brain Res.*, 105, 121-128.
- Ossola, L., Maitre, M., Blindermann, J.M. and Mandel, P. (1979) Enzymes of GABA metabolism in tissue culture. In "GABA-Biochemistry and CNS functions". Eds. Mandel, P. and De Feudis, F.V. Plenum Press, New York, pp. 139-160.
- Otten, U. and Thoenen, H. (1975) Circadian rhythm of tyrosine hydroxylase induction by short-term cold stress : modulatory action of glucocorticoids in new born and adult rats. *Proc. Natl. Acad. Sci. (USA)*, 72, 1415-1419.
- Otten, U. and Thoenen, H. (1976a) Selective induction of tyrosine hydroxylase and dopamine β -hydroxylase in sympathetic ganglia in organ culture : role of glucocorticoids as modulators. *Mol. Pharmacol.*, 12, 353-361.
- Otten, U. and Thoenen, H. (1976b) Modulatory role of glucocorticoids on NGF-mediated enzyme induction in organ cultures of sympathetic ganglia. *Brain Res.*, 111, 438-441.
- Owen, D.G., Barker, J.L., Segal, M. and Study, R.E. (1986) In: "Molecular and Cellular Mechanisms of Anaesthetics" Eds. Roth, S.H. and Miller, K.W. Plenum Press, New York, pp. 27-41.
- Page, M.A., Krebs, H.A. and Williamson, D.H. (1971) Activities of enzymes of ketone-body utilization in brain and other tissues of suckling rats. *Biochem. J.*, 121, 49-53.
- Pardridge, W.M. and Mietus, L.J. (1980) Palmitate and cholesterol transport through blood-brain barrier. *J. Steroid Biochem.*, 34, 463-466.

- Patel, M.S. (1979) Influence of neonatal hypothyroidism on the development of ketone-body-metabolizing enzymes in rat brain. *Biochem. J.*, 184, 169-172.
- Patel, M.S. and Owen, O.E. (1977) Development and regulation of lipid synthesis from ketone bodies by rat brain. *J. Neurochem.*, 28, 109-114.
- Patel, M.S., Johnson, C.A., Rajan, R. and Owen, O.E. (1975) The metabolism of ketone bodies in developing human brain : development of ketone-body-utilizing enzymes and ketone bodies as precursors for lipid synthesis. *J. Neurochem.*, 25, 905-908.
- Patel, M.S., Russel, J.J. and Gershman, H. (1981) Ketone-body-metabolism in glioma and neuroblastoma cells. *Proc. Natl. Acad. Sci. (USA)*, 78, 7214-7218.
- Patel, A.J., Hunt, A. and Tahourdin, C.S.M. (1983a) Regional development of glutamine synthetase activity in the rat brain and its association with the differentiation of astrocytes. *Dev. Brain Res.*, 8, 31-37.
- Patel, A.J., Hunt, A. and Tahourdin, C.S.M. (1983b) Regulation of *in vivo* glutamine synthetase activity by glucocorticoids in the developing rat brain. *Dev. Brain Res.*, 10, 83-91.
- Patel, A.J., Weir, M.D., Anthony, H., Tahourdin, C.S.M. and Thomas, D.G.T. (1985) Distribution of glutamine synthetase and glial fibrillary acidic protein and correlation of glutamine synthetase with glutamate decarboxylase in different regions of the rat central nervous system. *Brain Res.*, 335, 1-9.
- Pavlik, A. and Buresova, M. (1984) The neonatal cerebellum : The highest level of glucocorticoid receptors in the brain. *Dev. Brain Res.*, 12, 13-20.
- Philibert, D. and Moguilewsky, M. (1983) Ru 28362, a useful tool for characterization of the glucocorticoid and mineralo-corticoid receptors (abstr.). *Annu. Meet. Endocrinol. Soc.*, 65th San Antonio, Texas, pp. 335.
- Phillips, S.R., Durden, D.A. and Boulton, A.A. (1974a) Identification and distribution of p-tyramines in the rat. *Can. J. Biochem.*, 52, 366-373.
- Phillips, S.R., Durden, D.A. and Boulton, A.A. (1974b) Identification and distribution of tryptamine in the rat. *Can. J. Biochem.*, 52, 447-451.
- Phillips, S.R., Davis, B.A., Durden, D.A. and Boulton, A.A. (1975) Identification and distribution of m-tyramine in the rat. *Can. J. Biochem.*, 53, 65-69.

- Picard, F., Homo, F. and Duval, D. (1980) Effect of glucocorticoids on cholesterol synthesis in isolated mouse thymocytes. *J. Steroid Biochem.*, 12, 253-258.
- Pittman, R.C. and Steinberg, D. (1977) Activatable cholesterol esterase and triacylglycerol lipase activities of rat adrenal and their relationship. *Biochem. Biophys. Acta.*, 487, 431-444.
- Plotsky, P.M. (1985) Hypophyseotropic regulation of adenohipophysial adrenocorticotropin secretion. *Fed. Proc.*, 44, 207-213.
- Preston, S.L. and Mc Morris, F.A. (1984) Adrenalectomy of rats results in hypomyelination of the central nervous system. *J. Neurochem.*, 42, 262-267.
- Raiteri, M., Carmine, R.D., Bertollini, A. and Levi, G. (1977) Effect of sympathomimetic amines on the synaptosomal transport of noradrenaline, dopamine and 5-hydroxytryptamine. *Eur. J. Pharmacol.*, 41, 133-138.
- Ramey, E.R. and Goldstein, M.S. (1957) The adrenal cortex and the sympathetic nervous system. *Physiol. Rev.*, 37, 155-195.
- Rastogi, R.B. and Singhal, R.L. (1978) Adrenocorticoids control 5-hydroxytryptamine metabolism in rat brain. *J. Neural Transm.*, 42, 63-71.
- Reese, J., Patrick, R.L. and Barchas, J.D. (1976) Phospholipid-induced activation of tyrosine hydroxylase from rat brain striatal synaptosomes. *Biochem. Pharmacol.*, 25, 2245-2250.
- Reichstein, T. and Shoppee, C.W. (1943) The hormones of the adrenal cortex. *Vitam. Horm.*, 1, 346-413.
- Reif-Lehrer, L. (1968a) Induction of glutamine synthetase in chick embryo retina. Effects of serum and of steroid structure. *Biochem. Biophys. Acta.*, 170, 263-270.
- Reif-Lehrer, L. (1968b) Development of glutamine synthetase activity in chick embryo retina cultures in the absence of added hydrocortisone. *Biochem. Biophys. Res. Commun.*, 33, 984-989.
- Reul, J.M.H.M. and De Klot, E.R. (1985) Two receptor systems for corticosterone in rat brain: microdistribution and differential occupation. *Endocrinology*, 117, 2505-2511.

- Reul, J.M.H.M. and De Kloet, E.R. (1986) Anatomical resolution of two types of corticosteroid receptor sites in rat brain with in vitro radiography and computerized image analysis. *J. Steroid Biochem.*, 24, 269-272.
- Reul, J.M.H.M., Van den Bosch, F.R. and De Kloet, E.R. (1987) Relative occupation of type-I and type-II corticosteroid receptors in rat brain following stress and dexamethasone treatment : functional implications. *J. Endocri.*, 115, 459-467.
- Rindi, G. and Ventura, V. (1961) Influence of adrenalectomy, adrenal cortex hormones and of cold on the γ -amino-butyric acid and glutamic acid content of the rat brain. *Ital. J. Biochem.*, 10, 135-146.
- Rivier, C. and Vale, W.W. (1983) Interaction of corticotropin-releasing factor and arginine vasopressin on adrenocorticotropin secretion in vivo. *Endocrinology*, 13, 939-942.
- Roberts, E. and Simonson, D.G. (1963) Some properties of L-glutamic decarboxylase in mouse brain. *Biochem. Pharmacol.*, 12, 113-134.
- Robins, D.M. and Schimke, R.T. (1978) Differential effects of estrogen and progesterone on ovalbumin mRNA utilization. *J. Biol. Chem.*, 253, 8925-8934.
- Roosevelt, T.S., Ruhmann-Wennhold, A. and Nelson, D.H. (1973) Adrenal corticoid effects upon rat brain mitochondrial metabolism. *Endocrinology*, 53, 619-625.
- Rothe, F., Schmidt, W. and Wolf, G. (1983) Postnatal changes in the activity of glutamate dehydrogenase and aspartate aminotransferase in the rat nervous system with special reference to the glutamate transmitter metabolism. *Dev. Brain Res.*, 11, 67-74.
- Rothschild, A.J., Langlais, P.J., Schatzberg, M.M., Miller, M.S., Saloman, M.S., Lerbinger, J.E., Cole, J.O. and Bird, E.D. (1985) The effects of a single acute dose of dexamethasone on monoamine and metabolite levels in rat brain. *Life sci.*, 36, 2491-2501.
- Saavedra, J.M., Coyle, J.T. and Axelrod, J. (1974) Developmental characteristics of phenylethanolamine and octopamine in the rat brain. *J. Neurochem.*, 23, 511-515.
- Saavedra, J.M., Kvetnansky, R. and Kopin, I.J. (1979) Adrenaline, noradrenaline and dopamine levels in specific brain stem areas of acutely immobilized rats. *Brain Res.*, 160, 271-280.
- Sadasivudu, B., Indira Rao, T. and Krishna Murthy, C.R. (1977) Metabolic effects of hydrocortisone in mouse brain. *Neurochem. Res.*, 2, 521-532.

- Sakly, M. and Koch, B. (1981) Lack of specific mineralocorticoid receptor in immature pituitary gland, relationship to regulation of ACTH release. *Neuroendocrinol. Lett.*, 3, 375-378.
- Sakly, M. and Koch, B. (1983) Ontogenetical variations of transcortin modulate glucocorticoid receptor function and corticotropic activity in the pituitary gland. *Horm. Metabol. Res.*, 15, 92-96.
- Sandler, M., Ruthven, C.R.J., Goodwin, B.L., Reynolds, G.P., Rao, V.A.R. and Coppen, A.A. (1979) Deficient production of tyramine and octopamine in cases of depression. *Nature*, 278, 357-358.
- Saphier, D. and Feldman, S. (1987) Effects of septal and hippocampal stimuli on paraventricular nucleus neurons. *Neuroscience*, 20, 749-755.
- Saphier, D. and Feldman, S. (1988) Iontophoretic application of glucocorticoids inhibits identified neurons in the rat paraventricular nucleus. *Brain Res.*, 453, 183-190.
- Sapirstein, V.S., Koul, O. and Jungawala, F.B. (1980) Regulation of cerebroside and sulfatide in an oligodendrogloma cell line. *Trans. Am. Soc. Neurochem.*, 11, 171.
- Sapolsky, R.M. (1986) Glucocorticoid toxicity in the hippocampus: reversal by supplementation with brain fuels. *J. Neurosci.*, 6, 2240-2244.
- Sapolsky, R.M. (1987) Glucocorticoids and hippocampal damage. *Trends in Neurochem. Sci.*, 10, 346-349.
- Sapolsky, R.M. and Mc Ewen, B.S. (1985) Down-regulation of neural corticosterone receptors by corticosterone and dexamethasone. *Brain Res.*, 339, 161-165.
- Sapolsky, R.M. and Meaney, M.J. (1986) Maturation of the adrenocortical stress response: Neuroendocrine control mechanisms and the stress hyporesponsive period. *Brain Res. Rev.*, 11, 65-76.
- Sapolsky, R.M., Krey, L.C. and Mc Ewen, B.S. (1983) Corticosterone receptors decline in a site-specific manner in the aged rat brain. *Brain Res.*, 289, 235-240.
- Sapolsky, R.M., Krey, L.C. and Mc Ewen, B.S. (1984) Stress down regulation corticosterone receptors in a site specific manner in the brain. *Endocrinology*, 114, 287-292.

- Sapolsky, R.M., Krey, L.C., Mc Ewen, B.S. and Rainbow, T.C. (1984) Do vasopressin-related peptides induce hippocampal corticosterone receptors? Implications for aging. *J. Neurosci.*, 6, 1479-1485.
- Sapolsky, R.M., Krey, L.C. and Mc Ewen, B.S. (1985) Prolonged glucocorticoid exposure reduced hippocampal neuron number: implications for aging. *J. Neurosci.*, 2, 1222-1227.
- Sapolsky, R.M., Packan, D.R. and Vale, W.W. (1988) Glucocorticoid toxicity in the hippocampus in vitro demonstration. *Brain Res.*, 453-367-671.
- Sarna, G.S., Tricklebank, M.D., Kantamaneni, B.D., Hunt, A., Patel, A.J. and Curzon, G. (1982) Effect of age on variables influencing the supply of tryptophan to the brain. *J. Neurochem.*, 39, 1283-1290.
- Schapiro, S. (1968) Maturation of the neuroendocrine response to stress in the rat. In "Early experience and behaviour" Eds. Newton, G. and Levine, S., Thomas, Springfield, IL, pp. 198-257.
- Schapiro, S., Vukovich, K. and Globus, A. (1973) Effects of neonatal thyroxine and hydrocortisone administration on the development of dendritic spines in the visual cortex of rats. *Exp. Neurol.*, 40, 286-296.
- Schatzberg, A.F., Rothschild, A.J., Langlais, P.J., Bird, E.D. and Cole, J.O. (1985) A corticosteroid dopamine hypothesis for psychotic depression and related states. *J. Psychiatr. Res.*, 19, 57-64.
- Schaumburg, B.P. and Bojesen, E. (1968) Specificity and thermodynamic properties of the corticosteroid binding to a receptor of rat thymocytes in vitro. *Biochem. Biophys. Acta.*, 170, 172-178
- Schmidt, T.J. and Litwack, G. (1982) Activation of the glucocorticoid-receptor complex. *Physiol. Rev.*, 62, 1131-1192.
- Schmidt, M.J. and Sanders-Bush, E. (1971) Tryptophan hydroxylase activity in developing rat brain. *J. Neurochem.*, 18, 2549-2551.
- Schwartz, R.D., Wess, M.J., Labarca, R., Skolnick, P. and Paul, S.M. (1987) Acute stress enhances the activity of the GABA receptor-gated chloride ion channel in brain. *Brain Res.*, 411, 151-155.
- Segal, H.L. and Kim, Y.S. (1963) Glucocorticoid stimulation of the biosynthesis of glutamic-alanine transaminase. *Proc. Natl. Acad. Sci. (USA)*; 50, 912-918.
- Seifert, S.C. and Gelehrter, T.D. (1978) Mechanism of dexamethasone inhibition of plasminogen activator in rat hepatoma cells. *Proc. Natl. Acad. Sci. (USA)*, 75, 6130-6133.

- Seillan, C., Duval, D. and Homo, F. (1981) Effect of dexamethasone on non-esterified fatty acid metabolism in isolated mouse thymocytes. *J. Steroid Biochem.*, 14, 829-833.
- Selye, H. (1946) General adaptation syndrome and diseases of adaptation. *J. Clin. Endocrinol. Metab.*, 6, 117-230.
- Shah, N.S., Stevens, S. and Himwich, H.E. (1968) Effect of chronic administration of cortisone on the tryptophan induced changes in amine levels in the rat brain. *Arch. Int. Pharmacodyn. Ther.*, 171, 285-295.
- Shaywitz, B.A., Cohen, D.J., Leekman, J.F., Young, J.G. and Bowers, M.B. Jr. (1983) Ontogeny of dopamine and serotonin metabolites in CSF of children with neurological disorders. *Develop. Med. Child Neurol.*, 22, 748-754.
- Shaywitz, B.A., Anderson, G.M. and Cohen, D.J. (1985) Cerebrospinal fluid (CSF) and brain monoamine metabolites in the developing rat pup. *Dev. Brain Res.*, 17, 225-232.
- Shen, J.T., and Ganong, W.F. (1976a) Effect of variations in adrenocortical function of dopamine β -hydroxylase and norepinephrine in the brain of the rat. *J. Pharmacol. Exp. Ther.*, 199, 639-648.
- Shen, J.T. and Ganong, W.F. (1976b) Effects of variations in pituitary-adrenal activity in dopamine β -hydroxylase activity in various regions of rat brain. *Neuroendocrinology*, 20, 311-318.
- Sherman, A. and Gebhart, G.F. (1974) Regional levels of GABA and glutamate in mouse brain following exposure to pain. *Neuropharmacology*, 13, 673-675.
- Siesjo, B. (1978) Brain energy metabolism. Wiley, New York.
- Sisken, B., Roberts, E. and Baxter, C.F. (1960) γ -Aminobutyric acid and glutamic decarboxylase activity in the brain of the chick. In "Inhibition in the nervous system and γ -aminobutyric acid". Eds. Roberts, E., Baxter, C.F., Van Harreveld, C., Wiersma, A.G., Adey, W.R. and Killam, K.F. Pergamon Press, New York, pp. 219-225.
- Skerritt, J.H., Triskidoo, P. and Johnston, G.A.R. (1981) Increased GABA binding in mouse brain following acute swim stress. *Brain Res.*, 215, 398-403.
- Slotkin, T.A., Barnes, G., Lau, C., Seidler, F.J., Trepanier, P., Weigel, S.J. and Whitmore, W.L. (1983) Development of polyamine and biogenic amine systems in brains and hearts of neonatal rats given dexamethasone: role of biochemical alterations in cellular maturation for producing deficits in ontogeny of neurotransmitter levels, uptake, storage and turnover. *J. Pharmacol. Exp. Ther.*, 221, 686-693.

- Spink, D.C., Porter, T.G., Wu, S.J. and Martin, D.L. (1987)
Kinetically different, multiple forms of glutamate decarboxylase in rat brain. *Brain Res.*, 421, 235-244.
- Stevens, W., Reed, D.J., Erickson, S. and Grosser, B.I. (1973)
The binding of corticosterone to brain proteins, diurnal variation. *Endocrinology*, 93, 1152-1156.
- Stone, D. and Hechter, O. (1954) Studies on ACTH action in perfused bovine adrenals : the site of action of ACTH in corticosteroidogenesis. *Arch. Biochem. Biophys.*, 51, 457-469.
- Stumpf, W.E. and Sar, M. (1976) Autoradiographic localization of estrogen, androgen, progestin and glucocorticosteroid in 'target tissues' and 'non-target tissues'. In "Receptors and mechanism of action of steroid hormones". Vol. I. Ed. Pásqualini, J.R. Marcel Dekker Inc., Basel, pp.41-84.
- Suzuki, K. (1965) The pattern of mammalian brain gangliosides. III. Regional and developmental differences. *J. Neurochem.*, 12, 969-979.
- Suzuki, K. (1976) Chemistry and metabolism of brain lipids. In "Basic Neurochemistry", Eds. Siegel, G.S., Albers, R.W., Katzman, R., Agranoff, B.W. Little Brown and Company, USA. pp. 308-328.
- Svennerholm, L. (1956) The quantitative estimation of cerebroside in nervous system. *J. Neurochem.*, 1, 42-53.
- Swanson, L.W., Sawchenko, P.E., Rivier, C. and Vale, W.W. (1983)
The organization of ovine corticotropin releasing factor (CRF)-immunoreactive cells and fibers in the rat brain : an immunohistochemical study. *Neuroendocrinology*, 36, 165-186.
- Sykes, J.E.C., Lopes-Cardozo, M. and Van den Bergh, S.G. (1986a)
Substrate utilization for energy production and lipid synthesis in oligodendrocyte enriched cultures prepared from rat brain. *Neurochem. Int.*, 8, 67-75.
- Sykes, J.E.C., Lopes-Cardozo, M. and Van den Bergh, S.G. (1986b)
Relationship between the pentose-phosphate pathway and the de novo synthesis of fatty acids and cholesterol in oligodendrocyte enriched glial cultures. *Neurochem.Int.*, 8, 77-82.
- Sze, P.Y. (1979) L-glutamate decarboxylase. In "GABA-Biochemistry and CNS functions". Eds. Mandel, P. and De Feudis, F.V. Plenum Press, New York, pp. 59-78.

- Sze, P.Y. (1980) Glucocorticoids as a regulatory factor for brain tryptophan hydroxylase during development. *Dev. Neuroscience.* 3, 217-223.
- Sze, P.Y. (1981) Developmental-regulatory aspects of brain tryptophan hydroxylase. In "Serotonin, current aspects of Neurochemistry and function", Eds. Haber, B. and Gabay, S. New York : Plenum, pp. 507-523.
- Sze, P.Y. (1985) Glucocorticoid binding to neuronal membrane : Effects on synaptosomal uptake of calcium. *J. Neurochem.* 44, 563.
- Sze, P.Y. and Hendrick, B.J. (1983) Effects of dexamethasone and other glucocorticoid steroids on tyrosine hydroxylase activity in the superior cervical ganglion. *Brain Res.*, 265, 81-86.
- Sze, P.Y. and Neckers, L. (1974) Requirement for adrenal glucocorticoid in the ethanol-induced increase of tryptophan hydroxylase in mouse brain. *Brain Res.*, 72, 375-378.
- Sze, P.Y., Neckers, L. and Towle, A.C. (1976) Glucocorticoids as a regulatory factor for brain tryptophan hydroxylase. *J. Neurochem.*, 26, 169-173.
- Sze, P.Y., Markey, K.A. and Towle, A.C. (1980) Hormonal regulation of neural enzymes during development. In "Prog. In Psychoneuroendocrinology". Eds. Brambilla, F., Racagni, G. and De Wied, D. Elsevier-North Holland Biomedical Press, pp. 647-653.
- Tardy, M., Bardakdjian, J. and Canard, P. (1979) GABA metabolism in cultured glial cells. In "GABA-Biochemistry and CNS functions". Eds. Mandel, P. and De Feudis, F.V., Plenum Press, New York, pp. 177-188.
- Teitelman, G., Joh, T.H., Park, D., Brodsky, M., New, M. and Reis, D.J. (1982). Expression of the adrenergic phenotype in cultured fetal adrenal medullary cells : role of intrinsic and extrinsic factors. *Dev. Biol.*, 89, 450-459.
- Telang, S.D. (1975) Effects of prenatal, neonatal and postweaning nutritional deficiencies on brain enzymes in rats. Ph.D. thesis, M.S. University, Baroda, India.
- Telegdy, G. and Vermes, J. (1975) Effect of adrenocortical hormones on activity of the serotonergic system in limbic structures in rats. *Neuroendocrinology*, 18, 16-26.
- Thierry, A.M., Javoy, F., Glowinski, J. and Kety, S.S. (1968) Effects of stress on the metabolism of norepinephrine, dopamine and serotonin in the central nervous system of the rat. I. Modifications of norepinephrine turnover. *J. Pharmacol. Exp. Ther.*, 163, 163-171.

- Thoenen, H. (1970) Induction of TH in peripheral and central adrenergic neurones by cold exposure of rats. *Nature*, 228, 861-862.
- Tildon, J.T., Merrill, S. and Roeder, L.M. (1983) Differential substrate oxidation by dissociated brain cells and homogenates during development. *Biochem. J.*, 216, 21-25.
- Tissari, A.H. (1973) Serotonergic mechanisms in ontogenesis. In "Fetal pharmacology". Ed. Boreus, L., Raven Press; New York, pp. 237-253.
- Tomkins, G.M. and Yielding, K.L. (1965) Action of steroid hormones and glutamic dehydrogenase. In "Actions of hormones on molecular processes". Eds. Litwack, G. and Kritchevsky, D. pp. 209-217.
- Torday, J.S., Smith, B.T. and Giroud, C.J.P. (1975) The rabbit fetal lung as a glucocorticoid target tissue. *Endocrinology*, 96, 1462-1467.
- Tornello, S., Orti, F., Denicola, A., Rainbow, T.C. and Mc Ewen, B.S. (1982) Regulation of glucocorticoid receptors in brain by corticosterone treatment of adrenalectomized rats. *Neuroendocrinology*, 35, 411-417.
- Tukianen, E. (1981) Effect of hypophysectomy and adrenalectomy on 5-hydroxytryptamine uptake by rat hypothalamic synaptosomes and blood platelets. *Pharmacol. Toxicol.*, 48, 139-144.
- Turner, B.B. (1978) Ontogeny of glucocorticoid binding in rodent brain. *Am. Zool.*, 18, 461-475.
-
- Vaccaro, D.E., Leeman, S.E. and Reif-Lehrer, L. (1979) Glutamine synthetase activity *in vivo* and primary cell cultures of rat hypothalamus. *J. Neurochem.*, 33, 953-957.
-
- Valeri, P., Angelucci, L. and Palmery, M. (1978) Specific corticosterone uptake in the hippocampus and septum varies with social settings in mice : hormone-receptor autoregulation may be involved. *Neurosci. Lett.*, 9, 249-254.
- Valeri, P., Palmery, M., Pattacchioli, F., Catalani, A., Tifa, B. and Angelucci, L. (1980) Role and regulation of brain glucocorticoid receptors. *Pharmacol. Res. Commun.*, 12, 283-292.
- Vandenberg, C.J., Vankempen, G.M.J., Schade, J.P. and Veldstra, H. (1965) Levels and intracellular localization of GAD and GABA-T and other enzymes during development of the brain. *J. Neurochem.*, 12, 863-865.

- Van Geijn, H.P., Zuspan, F.P., Copeland, S.J., Vorys, A.S., Zuspan, M.F. and Scott, G.D. (1979) The effects of hydrocortisone on the development of the amine systems in the fetal brain. *Am. J. Obstet. Gynecol.*, 135, 743-750.
- Vanloon, G.R., Shum, A. and Solf, M.J. (1981a) Decreased brain serotonin turnover after short term (two hour) adrenalectomy in rats : a comparison of four turnover methods. *Endocrinology*, 108, 1392-1402.
- Vanloon, G.R., Shum, A. and De Souza, E.B. (1981b) Serotonin turnover correlates inversely with plasma adrenocorticotropin during the triphasic response to adrenalectomy in rats. *Endocrinology*, 108, 2269-2276.
- Veldhuis, H.D., Van Koppen, C., Van Ittersum, M. and De Kloet, E.R. (1982) Specificity of the adrenal steroid receptor system in rat hippocampus. *Endocrinology*, 110, 2044-2051.
- Vermes, I., Smelik, P.G. and Mulder, A.H. (1976) Effects of hypophysectomy, adrenalectomy and corticosterone treatment on uptake and release of putative central neurotransmitters by rat hypothalamus in vitro. *Life Sci.*, 19, 1719-1726.
- Vernadakis, A. (1974) Neurotransmission : proposed mechanism of steroid hormones in the regulation of brain function. In "Proc. Mie Conf. Int. Soc. Psychoneuroendocrinology". Ed. Hatatoni, N., Karger, S., Basel, pp. 251-258.
-
- Volpe, J.J., Goldberg, R.I. and Bhat, N.R. (1985) Cholesterol biosynthesis and its regulation in dissociated cell cultures of fetal rat brain : developmental changes and the role of 3-hydroxy-3-methyl glutaryl coenzyme A reductase. *J. Neurochem.*, 45, 536-543.
- Walker, P.G. (1954) A colorimetric method for the estimation of acetoacetate. *Biochem. J.*, 58, 609-704.
- Warsh, J.J., Coscina, D.V., Godse, D.D. and Chau, P.W. (1979) Dependence of brain tryptamine formation on tryptophan availability. *J. Neurochem.*, 32, 1191-1196.
- Watson, J.D., Hopkins, N.H., Roberts, J.W., Steitz, J.A. and Weiner, A.M. (1987) Molecular biology of the gene. Vol. I. Benjamin/Cummings Publ., California, pp. 676-740.
- Webber, R.J. and Edmond, J. (1977) Utilization of L(+)-3-hydroxybutyrate, D(-)-3-hydroxybutyrate, acetoacetate and glucose for respiration and lipid synthesis in 18-day old rat. *J. Biol. Chem.*, 252, 5222-5228.

- Weber, G. (1968) Hormonal control of gluconeogenesis. In "The biological basis of medicine", Vol.2, Eds. Bitter, E.E. and Bitter, N., Academic Press, London and New York, pp. 263-308.
- Weber, G., Srivastava, S.K. and Singhal, R.L. (1965) Role of enzymes in homeostasis. VII. Early effects of corticosteroid hormones on hepatic gluconeogenic enzymes, ribonucleic acid metabolism and amino acid level. *J.Biol.Chem.*, 240, 750-756.
- Wells, M.A. and Dittmer, J.C. (1967) A comprehensive study of postnatal changes in concentration of lipids of developing rat brain. *Biochemistry*, 6, 3169-3175.
- White, A., Handler, P. and Smith, E.L. (1973) Principles of Biochemistry. McGraw Hill, New York, pp. 579-586.
- Williamson, D.H. (1982) The production and utilization of ketone bodies in the neonate. In "The biochemical development of the fetus and neonate". Ed. Jones, C.T., Amsterdam : Elsevier Biochemical Press, pp. 621-650.
- Williamson, D.H. and Mellanby, J. (1974) D-(-)-3-Hydroxybutyrate In "Methods of enzymatic analysis". Ed. Bergmeyer, H.S. Vol.4, Academic Press, New York, pp. 1836-1839.
- Williamson, D.H., Bates, M.W., Page, M.A. and Krebs, H.A. (1971) Activities of enzymes involved in acetoacetate utilization in adult mammalian tissues. *Biochem. J.*, 121, 41-47.
- Wolkowitz, O., Sutton, M., Koulu, M., Labarca, R., Wilkinson, L., Doran, A., Hauger, R., Pickar, D. and Crawley, J. (1986) Chronic corticosterone administration in rats : Behavioural and biochemical evidence of increased central dopaminergic activity. *Eur. J. Pharmacol.*, 122, 329-338.
- Woodbury, D.M. and Vernadakis, A. (1958) Relation of brain excitability to brain γ -aminobutyric acid concentration. *Fed. Proc.*, 17, 420.
- Wrange, O., Carlstedt-Duke, J. and Gustafsson, J. (1979) Purification of the glucocorticoid receptor from rat liver cytosol. *J. Biol. Chem.*, 254, 9284-9290.
- Wrange, O., Okret, S., Radojcic, M., Carlstedt-Duke, J. and Gustafsson, J. (1984) Characterization of the purified activated glucocorticoid receptor from rat liver cytosol. *J. Biol. Chem.*, 259, 4534-4541.
- Wurtman, R.J. (1966) Control of epinephrine synthesis in the adrenal medulla by the adrenal cortex : hormonal specificity and dose-response characteristics. *Endocrinology*, 79, 608-614.

- Wurtman, R.J., Hefti, F. and Melamed, E. (1981) Precursor control of neurotransmitter synthesis. *Pharmacol. Rev.*, 32, 315-335.
- Yates, F. and Maran, J. (1979) In "Handbook of physiology" Eds. Greep, R. and Astwood, E. American Physiological Soc., pp. 367-404.
- Yeh, Y.Y., Streuli, V.L. and Zee, P. (1977) Ketone bodies serve as important precursors of brain lipids in the developing rat. *Lipids*, 12, 957-964.
- Yoneda, Y., Kanmori, K., Ida, S. and Kuriyama, K. (1983) Stress induced alterations in metabolism of γ -amino-butyric acid in rat brain. *J. Neurochem.*, 40, 350-356.
- Yongue, B.G. and Roy, E.J. (1987) Endogenous aldosterone and corticosterone in brain cell nuclei of adrenal-intact rats : regional distribution and effects of physiological variations in serum steroids. *Brain Res.*, 436, 149-161.
- Yuwiler, A., Geller, E. and Schapiro, S. (1974) Effect of neonatal corticoids on tryptophan pyrrolase and brain serotonin. In 'Hormones, metabolism and stress' Eds. Nemeth, S. Plenum Press, London. pp. 215-224.
- Yuwiler, A., Simon, M., Bennett, B., Plotkin, S., Wallace, R., Brammer, G. and Ulrich, R. (1978) Effect of neonatal corticoid treatment on tryptophan and serotonin metabolism. *Endocrinol. Exp.*, 12, 21-31.