Drug Dosage

The authors and the publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accord with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new and/or infrequently employed drug.
Absence of Ultradian Rhythm or Diurnal Variation in Insulin-Like Growth Factor-I in Rats
Donaghue, K.C.; Badger, T.M.; Millard, W.J.; Frisch, L.S.; Russell, W.E. 1

Hepatic Vagotomy Abolishes the Circadian Rhythm of Lipogenic Responsiveness to Insulin and Reduces Fat Stores in Hamsters
Martin, D.D.; Cincotta, A.H.; Meier, A.H. 9

Correlative Changes of the Gonadotropin-Releasing Hormone and Gonadotropin-Releasing-Hormone-Associated Peptide Immunoreactivities in the Pituitary Portal Plasma in Female Rats
Sarkar, D.K.; Mitsugi, N. 15

Physiologically Significant Inhibitory Hypothalamic Action of Substance P on Prolactin Release in the Male Rat
Arisawa, M.; Snyder, G.D.; Yu, W.H.; De Palatis, L.R.; Ho, R.H.; McCann, S.M. 22

Neuropeptide Y Stimulates Growth Hormone and Gonadotropin Release from the Goldfish Pituitary in vitro
Peng, C.; Huang, Y.-H.; Peter, R.E. 28

Naloxone Affects the Luteinizing Hormone Secretory Pattern in the Short- and Long-Term Ovariectomized Rat

Pyridostigmine Potentiates L-Dopa but not Arginine- and Melanocyte-Stimulating Hormone Secretion in Children

Dopaminergic and Beta-Adrenergic Receptor Control of Alpha-Stress
Lindley S.E.; Lookingland, K.J.; Moore, K.E. 46

Vagal Mediation of Corticotropin-Releasing-Factor-Induced Increase in Insulinemia in Lean and Genetically Obese fa/fo Rats
Rohner-Jeanrenaud, F.; Jeanrenaud, B. 52

Glucocorticoids Inhibit Glucose Transport in Cultured Hippocampal Neurons and Glia
Horner, H.C.; Packan, D.R.; Sapolsky, R.M. 57
Hypothalamic Atrial Natriuretic Peptide Secretion Plasticity: Differential Modulation of Alpha and Beta Adrenoceptors Bush, A.I.; Huang, W.; Copolov, D.L.; Lim, A.T.W. ... 65
Effect of Prolactin Replacement on the Number of Tyrosine Hydroxylase Expressing Neurons in the Arcuate Nuclei of Ames Dwarf and Normal Mice Morgan, W.W.; Besch, K.C..................................................... 70
Dopamine Inhibits the Arachidonate and Prolactin Release Stimulated by Thyrotropin-Releasing Hormone through an Islet-Activating Protein-Sensitive GTP-Binding Protein in Anterior Pituitary Cells Ohmachi, M.; Hirota, K.; Koike, K.; Kadowaki, K.; Yamaguchi, M.; Miyake, A.; Tanizawa, O ........................................ 75
Substance P Stimulates Arginine Vasopressin and Inhibits Adrenocorticotropin Release in vivo in the Rat Chowdrey, H.S.; Jessop, D.S.; Lightman, S.L .................................. 90
Aromatase, 5-Alpha-Reductase, and Androgen Receptor Levels in the Fetal Monkey Brain during Early Development Sholl, S.A.; Kim, K.L .................................................................... 94
Comparison of the Effects of Ether and Restraint Stress on the Activity of Tubero-infundibular Dopaminergic Neurons in Female and Male Rats Lookingland, K.J.; Gunnet, J.W.; Toney, T.W.; Moore, K.E. 99

Rapid Communication

Announcements ................................................................. 116
Original Paper
Melatonin Production by the Guinea Pig Pineal Gland in vitro
McCance, I.; Parkington, H.C; Coleman, H.A ......................... 117
Age-Related Differences in the Release of Luteinizing Hormone and Gonadotropin-Releasing Hormone in Ovariectomized Rats
Hwang, C.; Pu, H.-F.; Hwang, C.-Y.; Liu, J.-Y.; Yao, H.-C;
Tung, Y.-F.; Wang, P.S ......................................................... 127
Corticotropin-Releasing Factor and Gonadotropin-Releasing Hormone Pulse Generator Activity in the Rhesus Monkey.
Electrophysiological Study
Williams, C.L.; Nishiara, M.; Thalabard, J.-C; Grosser,
P.M.; Hotchkiss, J.; Knobil, E ........................................ 133
Differential Effects of an Luteinizing-Hormone-Releasing 
Hormone (LHRH) Antagonist Analogue on Lordosis 
Behavior Induced by LHRH and the LHRH Fragment 
Ac-LHRH
Moss, R.L.; Dudley, C.A ......................................................... 138
Peripubertal Treatment with N-Methyl-D-Aspartic Acid or 
Neonatally with Monosodium Glutamate Accelerates 
Sexual Maturation in Female Rats, an Effect Reversed by 
MK-801
MacDonald, M.C.; Wilkinson, M ........................................ 143
Age-Related Changes in Hypothalamic-Pituitary-Adrenocorti-
cal Axis Activity in the Rat. In vitro Studies
Scaccianoce, S.; Di Sciuolillo, A.; Angelucci, L ....................... 150
Role of Hypothalamic Factors (Growth-Hormone-Releasing 
Hormone and Gamma-Aminobutyric Acid) in the Regula-
tion of Growth Hormone Secretion in the Neonatal and 
Adult Rat
Acs, Z.; Lónárt, G.; MAKara, GB ........................................ 156
Oestrogen Modulation of Excitatory and Noradrenergic Input 
to Rat Medial Preoptic Gamma Aminobutyric Acid Neu-
rone Demonstrated by Microdialysis
Herbison, A.E.; Heavens, R.P.; Dyer, R.G ......................... 161
Time Course of ACTH 4-10 Effects on Human Attention 
Born, J.; Unseld, U.; Pietrowsky, R.; Bickel, U.; Voigt, K.; 
Fehm, H.L ................................................................. 169
Brain Regulation of Renin Secretion Involves Central Histaminergic Neurons
Matzen, S.; Knigge, U.; Warberg, J. ................................. 175

Physiological and Biochemical Indices of Neurohypophyseal Function in the Aging Fischer Rat Silverman, W.F.; Aravich, P.A.; Sladek, J.R., Jr.; Sladek, CD. 181

Adrenergic Regulation of Hypothalamic Proenkephalin Neurons: Evidence for Opposite Effects in Subpopulations Terminating in Median Eminence and Neurointermediate Pituitary
George, S.R.; Roldan, L.; Haas, D.A. ................................. 191

Melatonin Entrain the Circadian Rhythm in the Rat Pineal N-Acetyltransferase Activity
Humlová, M.; Illnerová, H. .................................................. 196

Kappa-Opioid-Receptor-Mediated Regulation of α-Melanocyte-Stimulating Hormone Secretion and Tuberohypophyiscal Dopaminergic Neuronal Activity
Manzanares, J.; Lookingland, K.J.; Moore, K.E. ................. 200

Serotonin Subtypes Involved in the Elevation of Serum Corticosterone Concentration in Rats by Direct- and Indirect-Acting Serotonin Agonists
Fuller, R.W.; Snoddy, H.D. .................................................. 206

Erratum ............................................................................. 212
Inhibitory Effect of 5-Alpha-Dihydroprogesterone on Nuclear Estrogen Receptor Binding of the Anterior Pituitary and Uterus in the Rat

Fuentes, M.A.; Muldoon, T.G.; Mahesh, V.B. .......................... 213

Estrogens Modulate the Circadian Rhythm of the Hypothalamic Beta-Endorphin Contents in Female Rats
Genazzani, A.R.; Trentini, G.P.; Petraglia, F.; De Gaetani, C.F.; Criscuolo, M.; Ficarra, G.; De Raffaello, B.; Cleva, M. 221

Duration and Frequency of Multifunit Electrical Activity Associated with the Hypothalamic Gonadotropin Releasing Hormone Pulse Generator in the Rhesus Monkey: Differential Effects of Morphine
Williams, C.L.; Nishihara, M.; Thalabard, J.-C.; O'Byrne, K.T.; Grosser, P.M.; Hotchkiss, J.; Knobil, E. .......................... 225

Pulsatile LH Secretion during Sexual Maturation in the Female Sheep: Photoperiodic Regulation in the Presence and Absence of Ovarian Steroid Feedback as Determined in the Same Individual
Ebling, F.J.P.; Kushler, R.H.; Foster, D.L. .......................... 229

Role of Arachidonic Acid or Its Metabolites in Growth-Hormone-Releasing Factor-Induced Release of Somatostatin from the Median Eminence Aquila, M.C.; Milenkovic, L.; Mc Cann, S.M.; Snyder, G.D. 238

Effects of Phosphatidylserine on the Neuroendocrine Response to Physical Stress in Humans
Monteleone, P.; Beinat, L.; Tonzillo, C; Maj, M.; Kemali, D. .......................... 243

Changes in the Function of Tuberoinfundibular Dopaminergic Neurons after Long-Term Estradiol Treatment in Fischer 344 Rats
Arita, J.; Kojima, Y.; Kimura, F. .......................... 249

Adenosine 3’,5’-Cyclic Monophosphate Enhances Dopamine Accumulation in Rat Hypothalamic Cell Culture Containing Dopaminergic Neurons
Thyroid Hormone Regulation of TRH mRNA Levels in Rat Paraventricular Nucleus of the Hypothalamus Changes during Ontogeny
Taylor, T.; Gyves, P.; Burgunder, J.M................................. 262

Opioids Hyperpolarize β-Endorphin Neurons via µ-Receptor Activation of a Potassium Conductance
Kelly, M.J.; Loose, M.D.; Ronnekleiv, O.K ....................... 268

Dopaminergic Regulation of Brain during Gonadotropin-Releasing Hormone in Male Goldfish during Spawning Behavior
Yu, K.L.; Peter, R.E................................................................. 276

Decreased Pituitary Growth Hormone Response to Growth Hormone-Releasing Factor in Cafeteria-Fed Rats: Dietary and Obesity Effects
Renier, G.; Gaudreau, P.; Hajjad, H.; Deslauriers, N.; Houde-Nadeau, M.; Byraeu, P........................................... 284

Tryptophan Administration Inhibits Nocturnal N-Acetyltransferase Activity and Melatonin Content in the Rat Pineal Gland. Evidence that Serotonin Modulates Melatonin Production via a Receptor-Mediated Mechanism
Reiter, R.J.; King, T.S.; Steinlechner, S.; Steger, R.W.; Richardson, B.A.......................................................... 291

Proopiomelanocortin Messenger RNA Levels Are Increased in the Anterior Pituitary of the Sheep Fetus after Adrenalectomy in Late Gestation
McMillen, I.C.; Antolovich, G.C.; Mercer, J.E.; Perry, R.A.; Silver, M................................................................. 297

Opiate-Thyroid Hormone Interactions in the Regulation of Thyrotropin Secretion in the Rat
Berglund, L.A.; Millard, W.J.; Gabriel, S.M.; Simpkins, J.W............................ 303
Original Paper

Effects of Estrogens on the Ultrastructural Characteristics of Female Rat Prolactin Cells as Evaluated by in situ Hybridization in Combination with Immunogold Staining Technique
Tong, Y.; Zha, H.; Labrie, F.; Pelletier, G. ............................... 309

Effects of Delta-9-Tetrahydrocannabinol, Cannabinol and Cannabidiol, Alone and in Combinations, on Luteinizing Hormone and Prolactin Release and on Hypothalamic Neurotransmitters in the Male Rat Murphy, L.L.; Steger, R.W.; Smith, M.S.; Bartke, A. ... 316

Epinephrine in Rat Hypophysial Portal Blood Is Derived Mainly from the Adrenal Medulla Pesce, G.; Guillaume, V.; Jezova, D.; Faudon, M.; Grino, M.; Oliver, C. .................................................................................. 322

Effect of Isoproterenol Stimulation on the Peripheral Zone of Intermediate Lobe Cells of the Rat Pituitary – Preferential Release of Electron-Lucent Granules Bäck, N. .................................................................................... 328

Effects of Oophorectomy, Sympathetic Denervation and Sex Steroids on Uterine Norepinephrine Content and Myometrial Contractile Response to Norepinephrine in the Guinea Pig Rydhström, H.; Walles, B.; Owman, C. ......................................... 332

Changes in Growth Hormone Secretion in Spontaneously Hypertensive Rats Aguilar, E.; Rodriguez, M.L.; Bellido, C; de la Fuente, M.; Pinilla, L. ........................................................................................................ 337

Somatostatin Messenger RNA in Hypothalamic Neurons Is Increased by Testosterone through Activation of Androgen Receptors and Not by Aromatization to Estradiol Argente, J.; Chowen-Breed, J.A.; Steiner, R.A.; Clifton, D.K. 342

Peripheral-Type Benzodiazepine Receptors Are Highly Concentrated in Mitochondrial Membranes of Rat Testicular Interstitial Cells Calvo, D.J.; Ritta M.N.; Calandra, R.S.; Medina, J.H. . . . 350

Role of Gamma-Aminobutyric Acid in the Zona incerta in the Control of Luteinizing Hormone Release and Ovulation Wilson, C.A.; James, M.D.; Leigh, A.J. ......................................... 354