

INDEX

Volume 178, July–September 1971

- Acetazolamide-induced inhibition of carbonic anhydrase in dog carotid artery, 529
- Acetylcarnitine, *d*- and *l*-, *d*- and *l*-carnitine and, pharmacology, comparison with choline and acetylcholine, 331
- Acetylcholine
- choline and, comparison with *d*- and *l*-carnitine and *d*- and *l*-acetylcholine, 331
 - effect of benzyltrimethylammonium bromide on responses to, 192
 - effect of zinc on responses of rat uteri to, 282
 - effects on autonomic receptor mechanisms in embryonic chick myocardial cell cultures, 73
- N-Acetyldaunomycin, relationship between metabolism and cardiac toxicity of, 216
- Acetylsalicylic acid, effects on various parameters in adjuvant arthritic rats, 223
- Actinomycin-D, effect on catecholamine formation in guinea-pig *vas deferens* after hypogastric nerve stimulation, 442
- Adenine-5'-phosphonucleotides, guanine-, uridine- and, in blood platelets and storage organelles of various species, 210
- Adenosine diphosphate, pulmonary vascular responses to, 549
- Adenyl cyclase, in human leukocytes, evidence for activation by separate *beta* adrenergic and prostaglandin receptors, 1
- Adrenal gland, rat, effects of 6-hydroxydopamine on activity of tyrosine hydroxylase and dopamine- β -hydroxylase in, 417
- Adrenergic blockade, stimulation and, *beta*, produced by quinterenol, 509
- Adrenergic mechanisms, in relaxation of guinea-pig *taenia coli in vitro*, 497
- Adrenergic nerve
- endings, accumulation of 5-hydroxytryptamine in vesicles containing norepinephrine in rat *vas deferens*, 30
 - endings, changes caused by 6-hydroxydopamine, 49
 - endings, selective increase of norepinephrine in rat pineal gland consecutive to depletion of neuronal 5-hydroxytryptamine, 42
 - in rat cerebral cortex, molecular requirements for inhibition of uptake of racemic ^3H -norepinephrine by tricyclic antidepressants and related compounds in, 474
- Adrenergic neuron, effect of tyramine, amphetamine and metaraminol on metabolic disposition of ^3H -norepinephrine released from, 464
- Adrenergic receptors, *beta*, prostaglandin and, evidence for activation of adenyl cyclase in human leukocytes by, 1
- Adriamycin, relationship between metabolism and cardiac toxicity of, 216
- Agonists, effects of benzyltrimethylammonium bromide on actions of, 192
- Alcohol dehydrogenases, in mice, comparison of pyrazole and 4-bromopyrazole as inhibitors of, 199
- Amines, sympathomimetic, intestinal relaxation in rabbit and sheep jejunum, comparison with dopamine, 63
- Amitriptyline, effect on conjugation of tetrahydrocortisone, 602
- Amphetamine, tyramine, metaraminol and, effect on metabolic disposition of ^3H -norepinephrine released from adrenergic neuron, 464
- Analgesic drugs
- effects on bioelectrical potentials evoked in brain stem of cat by electrical stimulation of gingiva and tooth pulp, 232
 - narcotic and narcotic antagonist, effects of *p*-chlorophenylalanine on activity of, 20
- Angiotensin-induced rise in blood pressure, effect of tolbutamide on, 130
- Antidepressants, tricyclic, related compounds and, molecular requirements for inhibition of uptake of racemic ^3H -norepinephrine into rat cerebral cortex slices by, 474
- Aortic strips, rabbit, activation of arterial glycogen phosphorylase in, 299
- Arteries
- carotid, dog, molecular CO_2 inertness demonstrated by inhibition of carbonic anhydrase, 529
 - mesenteric, early pre- and postjunctional effects of 6-hydroxydopamine, 49
- Arthritis, adjuvant-induced, in rats, drug effects on physiologic, biochemical and immunologic parameters, 223
- Ascorbic acid, isoascorbic acid, mannitol and, protective effect against tetracycline-induced nephrotoxicity, 152
- Atria, trachea and, guinea pig, unique *beta* adrenergic stimulation and blockade by quinterenol in, 509
- Atrial strips, guinea pig, inotropic and chronotropic effects of bretylium on, 94
- Atrial tissue, isolated, canine and rabbit, electrophysiologic effects of lidocaine, 81
- Atropine, intraperitoneal, route of absorption, 562

- Autonomic receptors, mechanisms in embryonic chick myocardial cell cultures, 73
- Axelrod, J., *see* Molinoff, P. B., 425
- Bailey, L. E. and Sures, H. A.: The effect of ouabain on the washout and uptake of calcium in the isolated cat heart, 259
- Bass, P., *see* Weisenthal, L. M., 497
- Belfi, K. J., *see* Nelson, E. B., 580
- Benzyltrimethylammonium bromide, antinicotinic action, 192
- Berndt, W. O.
see Mudge, G. H., 159
see Wade, D. N., 173
- Bethahistine, metabolites and vascular responses in forelimb of dog, 122
- Bhatnagar, R. K. and Moore, K. E.: Effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on the norepinephrine contents of neuronal cell bodies and terminals, 450
- Bigger, J. T., Jr., *see* Mandel, W. J., 81
- Bile
 excretion and distribution of iophenoxic acid in, 159
 excretion of ouabain, effect of carbon tetrachloride on, 589
 metabolites of iophenoxic acid in, 173
- Biotransformation
 hexobarbital, in dog, effect of hemorrhage on rate of, 595
 toxicity and, of parathion in mice, effect of chlorpromazine on, 395
- Blocking agents, *alpha* and *beta*, effect on activation of adenyl cyclase in human leukocytes, 1
- Blood
 liver, kidney and, of dogs and rats, *in vitro* metabolism of N-methylcarbamates, Zectran and Mesurol, by, 371
 platelets, and storage organelles of various species, adenine-, guanine- and uridine-5'-phosphonucleotides in, 210
- Blood loss, effect on rate of hexobarbital biotransformation in dog, 595
- Blood pressure, effect of tolbutamide, 130
- Blood vessels, pulmonary, responses to adenosine diphosphate, 549
- Blum, K., Seifter, E. and Seifter, J.: The pharmacology of *d*- and *l*-carnitine and *d*- and *l*-acetylcarnitine: Comparison with choline and acetylcholine, 331
- Borzelleca, J. F., *see* Putney, J. W., Jr., 180
- Bost, R. G., *see* Konzett, H., 122
- Bourgeois, J. G., *see* Erickson, D. G., 411
- Bourne, H. R. and Melmon, K. L.: Adenyl cyclase in human leukocytes: Evidence for activation by separate *beta* adrenergic and prostaglandin receptors, 1
- Bouwman, S., *see* Bueding, E., 402
- Bowman, E. R., *see* Konzett, H., 122
- Bowman, F. J., *see* Konzett, H., 122
- Brain
 cortex, rat, molecular requirements for inhibition of uptake of racemic ^3H -norepinephrine into rat by tricyclic antidepressants and related compounds in, 474
 5-hydroxytryptamine turnover in, relationship to tolerance and physical dependence in mice, 20
 mice, effects of chlorpromazine on levels of parathion and paraoxon in, 395
 rabbit, spinal cord and, fate of intracisternal norepinephrine- ^3H in, 8
 rat, effect of lithium on concentrations of 5-hydroxyindoleacetic acid and serotonin in, 325
 rat, levels of LSD in, 625
- Brain stem, cat, effects of morphine, pentobarbital and chlorpromazine on bioelectrical potentials evoked by electrical stimulation of gingiva and tooth pulp in, 232
- Bretylum tosylate, characteristics and mechanism of inotropic and chronotropic actions of, 94
- Brimijoin, S. and Molinoff, P. B.: Effects of 6-hydroxydopamine on the activity of tyrosine hydroxylase and dopamine- β -hydroxylase in sympathetic ganglia of the rat, 417
- Brindle, S. D., *see* Lukas, G., 562
- 4-Bromopyrazole, comparison with pyrazole as inhibitor of alcohol dehydrogenases in mice, 199
- Bronchodilator activity, of prostaglandins E₁ and E₂, 541
- Brown, J. H., *see* Pollack, S. H., 609
- Bueding, E., Náquira, C., Bouwman, S. and Rose, G.: The antischistosomal activity of a nitrovinylfuran derivative (SQ 18,506) in mice and hamsters, 402
- Bueding, E., *see* Erickson, D. G., 411
- Bush, M. T., *see* Gerber, N., 567
- Caffeine, intraperitoneal, route of absorption, 562
- Calcium
 fluxes, alterations, twitch potentiation, contractures and, produced by tetraalkylammonium ions, 631
 ion, activation of arterial phosphorylase by, 299
 permeability of adrenergic nerve endings, change produced by 6-hydroxydopamine, 49
 washout and uptake in isolated cat heart, effect of ouabain, 259
- Cannibinol, *l*- Δ^9 - and *l*- Δ^8 -*trans*-tetrahydrocannabinol and, effects on schedule-controlled behavior of pigeons and rats, 241
- Carbon dioxide, molecular, inertness on carotid

- chemoreceptor, demonstration by inhibition of carbonic anhydrase, 529
- Carbonic anhydrase, demonstration of molecular CO₂ inertness on carotid chemoreceptor by inhibition of, 529
- Carbon tetrachloride
 - effect on metabolism of liver glycogen in rat, 383
 - induced liver damage, effects on hepatic transport of ouabain in rat, 589
- Cardiovascular system
 - effects of saxitoxin, 103
 - peripheral and central effects of L(-)-dopa, 517
- Carnitine, *d*- and *l*-, *d*- and *l*-acetylcarnitine and, pharmacology, comparison with choline and acetylcholine, 331
- Cat(s)
 - brain stem, effects of morphine, pentobarbital and chlorpromazine on bioelectrical potentials evoked by electrical stimulation of gingiva and tooth pulp in, 232
 - bronchodilator activity of prostaglandins E₁ and E₂ in, 541
 - cardiovascular actions of saxitoxin, 103
 - early pre- and postjunctional effects of 6-hydroxydopamine, 49
 - effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on norepinephrine contents of neuronal cell bodies and terminals, 450
 - heart, isolated, effect of ouabain on washout and uptake of calcium in, 259
 - locus of action of centrally acting muscle relaxants, diazepam and tybamate in, 350
 - papillary muscles, inotropic and chronotropic effects of bretylium on, 94
 - pharmacology of *d*- and *l*-carnitine and *d*- and *l*-acetylcarnitine in, comparison with choline and acetylcholine, 331
 - vasodilatory effects of tetrodotoxin in, 110
- Catecholamine(s)
 - appearance in coronary sinus blood of dog after nerve stimulation and norepinephrine, effect of cocaine on, 482
 - compensatory release, after saxitoxin-induced hypotension, 103
 - demonstrated histochemically in myenteric plexus of guinea-pig ileum, 311
 - effect on activation of adenylyl cyclase in human leukocytes, 1
 - effects on autonomic receptor mechanisms in embryonic chick myocardial cell cultures, 73
 - formation in guinea-pig vas deferens after hypogastric nerve stimulation, roles of tyrosine hydroxylase and new protein synthesis in acceleration of, 442
 - metabolite, as cause of peripheral and central cardiovascular actions of L(-)-dopa, 517
 - release from adrenergic nerves, as cause of relaxation of guinea-pig taenia coli produced by field stimulation and nicotine, 497
- Cattle, adenine-, guanine- and uridine-5'-phosphonucleotides in blood platelets and storage organelles of, 210
- Cell
 - bodies and terminals, neuronal, effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on norepinephrine contents of, 450
 - cultures, myocardial, embryonic chick, autonomic receptor mechanisms in, 73
 - membrane, submaxillary gland, distribution of ¹⁴C-nicotine *in vitro*, 180
- Cerebral cortex, slices, rat, molecular requirements for inhibition of uptake of racemic ³H-norepinephrine by tricyclic antidepressants and related compounds in, 474
- Cha, Y. N., *see* Kao, C. Y., 110
- Chalmers, J. P. and Wurtman, R. J.: The fate of intracisternally administered norepinephrine-³H in the brain and spinal cord of the rabbit, 8
- Chan, W. Y.: Effects of prolonged administration of vasopressin on plasma sodium and on renal excretion of electrolytes and water, 141
- Chao, J. C., *see* Ertel, R. J., 73
- Chemoreceptor, carotid, molecular CO₂ inertness on, demonstration by inhibition of carbonic anhydrase, 529
- Chicken
 - antinicotinic actions of benzyltrimethylammonium bromide in, 192
 - embryonic myocardial cell cultures, autonomic receptor mechanisms in, 73
- Chlordane, effect on metabolism of 5,5-diphenylhydantoin in rat, 567
- p*-Chlorophenylalanine
 - effect on development of tolerance to morphine in mice, 20
 - effect on norepinephrine and 5-hydroxytryptamine concentrations in adrenergic nerve endings in rat pineal gland, 42
- Chlorpromazine
 - antagonism of quinterenol effects, 509
 - effect on conjugation of tetrahydrocortisone, 602
 - effect on toxicity and biotransformation of parathion in mice, 395
 - morphine, pentobarbital and, effects on bioelectrical potentials evoked in brain stem of cat by electrical stimulation of gingiva and tooth pulp, 232
- Cholesterol, biosynthesis, hepatic, regulation by clofibrate administration, 361
- Choline, acetylcholine and, comparison with *d*- and *l*-carnitine and *d*- and *l*-acetylcarnitine, 331
- Circulation, portal, as route of absorption of

- intraperitoneally administered compounds, 562
- Clarke, D. E., *see* Ertel, R. J., 73
- Clofibrate, regulation of hepatic cholesterol biosynthesis by, 361
- Cocaine, inability to potentiate responses to cardiac sympathetic nerve stimulation in dog, 482
- Coon, J. M., *see* Vukovich, R. A., 395
- Cortex, cerebral, slices, rat, molecular requirements for inhibition of uptake of racemic ³H-norepinephrine by tricyclic antidepressants and related compounds in, 474
- Cortisone acetate, effect on thermal labilization of hepatic lysosomes, 609
- Cumming, J. F., McClung, H. W. and Mannering, G. J.: The effect of hemorrhage on the rate of hexobarbital biotransformation in the dog, 595
- Cycloheximide, effect on catecholamine formation in guinea-pig vas deferens after hypogastric nerve stimulation, 442
- Cyclophosphamide, effects on various parameters in adjuvant arthritic rats, 223
- Daniel, E. E., Fair, S. and Kidwai, A. M.: Zinc and smooth muscle contractility. II. Zinc content and accumulation in rat uterus and their relation to contractility changes from zinc and ouabain, 290
- Daniel, E. E., Fair, S., Kidwai, A. M. and Polacek, I.: Zinc and smooth muscle contractility. I. Study of the mechanisms of zinc-induced contractility changes in rat uteri, 282
- Da Prada, M., *see* Goetz, U., 210
- Daunomycin, related compounds and, relationship between metabolism and cardiac toxicity of, 216
- Daunomycinone, as metabolite of daunomycin and adriamycin in blood-perfused dog heart, 216
- DDT, effect on metabolism of 5,5-diphenylhydantoin in rat, 567
- Decamethonium, responses of rat diaphragm to, 339
- Dervinis, A., *see* Rosenthale, M. E., 541
- Desbiens, N.
see Mudge, G. H., 159
see Wade, D. N., 173
- Desmethylimipramine
effect on norepinephrine and 5-hydroxytryptamine concentrations in adrenergic nerve endings in rat pineal gland, 42
electrical stimulation, α -methyltyrosine and, on norepinephrine contents of neuronal cell bodies and terminals, 450
- Dexamethasone, effect on thermal labilization of hepatic lysosomes, 609
- Diaphragm, rat, depolarizing neuromuscular block in, 339
- Diazepam
competition for thyroxine binding sites, 204
tybamate and, centrally acting muscle relaxants, locus of action, 350
- Diazoxide, effect of tolbutamide on hyperglycemic action of, 130
- Digitalis, glycosides, myocardial sensitivity during hypokalemia, 271
- Digoxin, tritiated, in dog, effect of acute hypokalemia on myocardial concentration and body distribution of, 271
- DiMartino, M. J., *see* Walz, D. T., 223
- Dingell, J. V., *see* Miller, K. W., 602
- Diphenylhydantoin, thyroxine-binding properties, comparison with diazepam, 204
- 5,5-Diphenylhydantoin, dose-dependent metabolism in rat, study using new method for isolation and quantitation of metabolites *in vivo* and *in vitro*, 567
- Dog(s)
action of ouabain on submaxillary secretion in, 616
atrial tissue, rabbit and, isolated, electrophysiologic effects of lidocaine, 81
effect of acute hypokalemia on myocardial concentration and body distribution of tritiated digoxin in, 271
effect of hemorrhage on rate of hexobarbital biotransformation in dog, 595
effect of tolbutamide on blood pressure in, 130
effects of prolonged administration of vasopressin on plasma sodium and on renal excretion of electrolytes and water in, 141
excretion and distribution of iophenoxic acid, 159
forelimb, metabolites of and vascular responses to betahistine in, 122
inability of cocaine to potentiate responses to cardiac sympathetic nerve stimulation in, 482
metabolism of iophenoxic acid in, 173
molecular CO₂ inertness on carotid chemoreceptor demonstrated by inhibition of carbonic anhydrase in, 529
peripheral and central cardiovascular effects of L(-)-dopa in, 517
protective effect of ascorbic acid, isoascorbic and mannitol against tetracycline-induced nephrotoxicity, 152
pulmonary vascular responses to adenosine diphosphate in, 549
rats and, *in vitro* metabolism of N-methylcarbamates, Zectran and Mesuroil, by liver, kidney and blood of, 371
relationship between metabolism and cardiac toxicity of daunomycin and related compounds, 216

- route of absorption of intraperitoneally administered compounds in, 562
- L(-)-Dopa, peripheral and central cardiovascular effects, 517
- Dopamine
increased formation in guinea-pig vas deferens after hypogastric nerve stimulation, 442
intestinal relaxation produced by, 63
- Dopamine- β -hydroxylase
sensitive enzymatic assay for, 425
tyrosine hydroxylase and, in sympathetic ganglia of rat, effects of 6-hydroxydopamine on activity of, 417
- Dretchen, K., Sokoll, M. D. and Long, J. P.: Antinicotinic action of benzyltrimethylammonium bromide (BTM), 192
- Electrolytes, renal excretion, plasma sodium and, effects of prolonged administration of vasopressin on, 141
- Embryo, chick, myocardial cell cultures, autonomic receptor mechanisms in, 73
- Enzyme, glycogen phosphorylase, activation in arterial smooth muscle, 299
- Epinephrine
effect on zinc accumulation in rat uterine tissue, 290
influence of cocaine on responses to cardiac sympathetic nerve stimulation and, 482
- Erickson, D. G., Bourgeois, J. G., Sadun, E. H. and Bueding, E.: Antischistosomal activity of a nitrovinylfuran derivative (SQ 18,506) in rhesus monkeys, 411
- Ertel, R. J., Clarke, D. E., Chao, J. C. and Franke, F. R.: Autonomic receptor mechanisms in embryonic chick myocardial cell cultures, 73
- Fair, S., *see* Daniel, E. E., 282, 290
- Forelimb, dog, metabolites of and vascular responses to betahistine in, 122
- Franke, F. R., *see* Ertel, R. J., 73
- Frankenheim, J. M., McMillan, D. E. and Harris, L. S.: Effects of *l*- Δ^9 - and *l*- Δ^9 -*trans*-tetrahydrocannabinol and cannabinol on schedule-controlled behavior of pigeons and rats, 241
- Frog
antinicotinic action of benzyltrimethylammonium bromide in, 192
pharmacology of *d*- and *l*-carnitine and *d*- and *l*-acetylcarnitine in, comparison with choline and acetylcholine, 331
twitch potentiation, contractures and alterations in calcium fluxes produced by tetraalkylammonium ions in, 631
- Galindo, A.: Depolarizing neuromuscular block, 339
- Ganglia
superior cervical, cat, effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on norepinephrine contents of, 450
sympathetic, of rat, effects of 6-hydroxydopamine on activity of tyrosine hydroxylase and dopamine- β -hydroxylase in, 417
- Gerber, N., Weller, W. L., Lynn, R., Rangno, R. E., Sweetman, B. J. and Bush, M. T.: Study of dose-dependent metabolism of 5,5-diphenylhydantoin in the rat using new methodology for isolation and quantitation of metabolites *in vivo* and *in vitro*, 567
- Gershon, M. D., *see* Robinson, R. G., 311
- Gessa, G. L., *see* Perez-Cruet, J., 325
- Gingiva, tooth pulp and, effects of morphine, pentobarbital and chlorpromazine on bioelectrical potentials evoked in brain stem of cat by electrical stimulation of, 232
- Gland
adrenal, rat, effects of 6-hydroxydopamine on activity of tyrosine hydroxylase and dopamine- β -hydroxylase in, 417
salivary, cat, effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on norepinephrine contents of, 450
submaxillary, rat, mechanisms of ^{14}C -nicotine distribution *in vitro*, 180
submaxillary, secretion in dog, action of ouabain, 616
- Glucocorticoids, vitamin E and, attenuation of thermal labilization of isolated hepatic lysosomes, 609
- Glucose, intraperitoneal, route of absorption, 562
- Glucuronide, of tetrahydrocortisone, method for measurement of formation *in vitro* of, 602
- Glycine, intraperitoneal, route of absorption, 562
- Glycogen
liver, in rat, effect of carbon tetrachloride on metabolism of, 383
phosphorylase, activation in arterial smooth muscle, 299
- Glycosides, digitalis, myocardial sensitivity during hypokalemia to, 271
- Goldsmith, C., *see* Marcus, F. I., 271
- Goldstein, D. B. and Pal, N.: Comparison of pyrazole and 4-bromopyrazole as inhibitors of alcohol dehydrogenases: Their potency, toxicity and duration of action in mice, 199
- Goetz, U., Da Prada, M. and Pletscher, A.: Adenine-, guanine- and uridine-5'-phosphonucleotides in blood platelets and storage organelles of various species, 210
- Grant, A. M., *see* Wales, J. K., 130
- Greengard, P., *see* Lukas, G., 562
- Guanethidine, effects on relaxation of guinea-pig taenia coli induced by field stimulation and nicotine, 497
- Guanine-5'-phosphonucleotides, adenine-, uri-

- dine- and, in blood platelets and storage granules of various species, 210
- Guinea pig(s)
- adenine-, guanine- and uridine-5'-phosphonucleotides in blood platelets and storage organelles of, 210
 - atrial strips, inotropic and chronotropic effects of bretylium on, 94
 - chemical and histochemical studies on sympathetic innervation of vas deferens and seminal vesicle of, 432
 - ileum myenteric plexus, histochemical study of synthesis and uptake of 5-hydroxytryptamine by, 311
 - taenia coli, adrenergic mechanisms in relaxation *in vitro* of, 497
 - trachea and atria, unique *beta* adrenergic stimulation and blockade by quinterenol in, 509
 - vas deferens, roles of tyrosine hydroxylase and new protein synthesis in acceleration of catecholamine formation in, 442
- Haeusler, G.: Early pre- and postjunctional effects of 6-hydroxydopamine, 49
- Hamsters, mice and, antischistosomal activity of nitrovinylfuran derivative (SQ 18,506) in, 402
- Harris, L. S., *see* Frankenheim, J. M., 241
- Hayashi, G., *see* Maruyama, Y., 20
- Heart
- cat, early pre- and postjunctional effects of 6-hydroxydopamine in, 49
 - cat, isolated, effect of ouabain on washout and uptake of calcium in, 259
 - embryonic chick, autonomic receptor mechanisms in, 72
 - rat, effect of tyramine, amphetamine and metaraminol on metabolic disposition of ³H-norepinephrine in, 464
 - rat, effects of 6-hydroxydopamine on activity of tyrosine hydroxylase and dopamine- β -hydroxylase in, 417
 - sensitivity to digitalis glycosides during hypokalemia, 271
 - sympathetic nerve stimulation in dog, inability of cocaine to potentiate responses to, 482
 - toxicity, of daunomycin and related compounds, relationship with metabolism, 216
- Heilman, R. D. and Lum, B. K. B.: Studies on the intestinal relaxation produced by dopamine, 63
- Hemorrhage, effect on rate of hexobarbital biotransformation in dog, 595
- Henderson, E. G. and Volle, R. L.: Twitch potentiation, contractures and alterations in calcium fluxes produced by tetraalkylammonium ions, 631
- Herman, E., *see* Mhatre, R., 216
- Hexamethonium, effects on relaxation of guinea-pig taenia coli induced by field stimulation and nicotine, 497
- Hexobarbital, biotransformation in dog, effect of hemorrhage on rate of, 595
- Hickenbottom, R. S. and Hornbrook, K. R.: Effects of carbon tetrachloride on the metabolism of liver glycogen in the rat, 383
- Hind leg
- cat, effects of saxitoxin, 103
 - cat, vasodilatory effects of tetrodotoxin, 110
- Hornbrook, K. R., *see* Hickenbottom, R. S., 383
- Hug, C. C., Jr., *see* Weisenthal, L. M., 497
- Huidobro, A., *see* Mhatre, R., 216
- p*-Hydroxyamphetamine, effect on conjugation of tetrahydrocortisone, 602
- Hydroxydiphenylhydantoin, dose-dependent metabolism in rat, 567
- 6-Hydroxydopamine
- early pre- and postjunctional effects, 49
 - effects on activity of tyrosine hydroxylase and dopamine- β -hydroxylase in sympathetic ganglia of rat, 417
- 5-Hydroxyindoleacetic acid, concentration in rat brain, effect of lithium on, 325
- 8-Hydroxyquinoline, effect on zinc accumulation in rat uterine tissue, 290
- 5-Hydroxytryptamine
- histochemical study of synthesis and uptake by myenteric plexus of guinea-pig ileum, 311
 - synthesis, stimulation by lithium, 325
 - turnover in brain, relationship to tolerance and physical dependence in mice, 20
 - ultrastructural cytochemistry and pharmacology in adrenergic nerve endings, accumulation in vesicles containing norepinephrine in rat vas deferens, 30
 - ultrastructural cytochemistry and pharmacology in adrenergic nerve endings, selective increase of norepinephrine in rat pineal gland consecutive to depletion of, 42
- Hydroxyzine, effect on metabolism of 5,5-diphenylhydantoin in rat, 567
- Hyman, A. L., Woolverton, W. C., Pennington, D. G. and Jaques, W. E.: Pulmonary vascular responses to adenosine diphosphate, 549
- Hypertension, caused by tolbutamide, 130
- Hypogastric nerve, stimulation, roles of tyrosine hydroxylase and new protein synthesis in acceleration of catecholamine formation in guinea-pig vas deferens after, 442
- Hypokalemia, acute, effect on myocardial concentration and body distribution of tritiated digoxin in dog, 271
- Hypotension
- caused by saxitoxin, 103
 - caused by tetrodotoxin, 110

- Ileum, guinea pig, myenteric plexus, histochemical study of synthesis and uptake of 5-hydroxytryptamine by, 311
- Imipramine, effect on conjugation of tetrahydrocortisone, 602
- Indomethacin
effect on thermal labilization of hepatic lysosomes, 609
effects on various parameters in adjuvant arthritic rats, 223
- Insalaco, J. R., *see* Salama, A. I., 474
- Intestine, relaxation produced by dopamine, 63
- Intraperitoneal administration, route of absorption, 562
- Ion(s)
tetraalkylammonium, twitch potentiation, contractures and alterations in calcium fluxes produced by, 631
zinc, as cause of contractility changes in rat uteri, 282
- Iophenoxic acid
excretion and distribution, 159
metabolism in dog, 173
- Iorio, L. C. and Moore, P. F.: Unique *beta* adrenergic stimulation and blockade by quinterenol, 509
- Isoascorbic acid, ascorbic acid, mannitol and, protective effect against tetracycline-induced nephrotoxicity, 152
- Isoproterenol
bronchodilator activity, 541
effects on autonomic receptor mechanisms in embryonic chick myocardial cell cultures, 73
influence of cocaine on responses to cardiac sympathetic nerve stimulation and, 482
- Jaim-Etcheverry, G. and Zieher, L. M.: Ultrastructural cytochemistry and pharmacology of 5-hydroxytryptamine in adrenergic nerve endings. III. Selective increase of norepinephrine in the rat pineal gland consecutive to depletion of neuronal 5-hydroxytryptamine, 42
- Jaim-Etcheverry, G., *see* Zieher, L. M., 30
- Jaques, W. E., *see* Hyman, A. L., 549
- Jejunum, rabbit and sheep, relaxation produced by dopamine, 63
- Johnson, D. G., *see* Thoa, N. B., 442
- Kao, C. Y., Nagasawa, J., Spiegelstein, M. Y. and Cha, Y. N.: Vasodilatory effects of tetradotoxin in the cat, 110
- Kao, C. Y., *see* Nagasawa, J., 103
- Kapadia, G. G., *see* Marcus, F. I., 271
- Kassarich, J., *see* Rosenthale, M. E., 541
- Kidney
dog, excretion and distribution of iophenoxic acid, 159
excretion of electrolytes and water, plasma sodium and, effects of prolonged administration of vasopressin, 141
liver, blood and, of dogs and rats, *in vitro* metabolism of N-methylcarbamates, Zectran and Mesurol, by, 371
rat, protective effect of ascorbic acid, isoascorbic acid and mannitol against tetracycline-induced toxicity, 152
- Kidwai, A. M., *see* Daniel, E. E., 282, 290
- Kirpekar, S. M., *see* Wakade, A. R., 432
- Koch-Weser, J., *see* Markis, J. E., 94
- Koerker, R. L. and Moran, N. C.: An evaluation of the inability of cocaine to potentiate the responses to cardiac sympathetic nerve stimulation in the dog, 482
- Konzett, H., Bost, R. G., Bowman, F. J., Bowman, E. R. and McKennis, H., Jr.: Betahistone, its metabolites and vascular responses in the forelimb of the dog, 122
- Kopin, I. J., *see* Thoa, N. B., 442
- Leitz, F. H. and Stefano, F. J. E.: The effect of tyramine, amphetamine and metamadol on the metabolic disposition of ³H-norepinephrine released from the adrenergic neuron, 464
- Leukocytes, human, adenyl cyclase in, evidence for activation by separate *beta* adrenergic and prostaglandin receptors, 1
- Lidocaine
effects on relaxation of guinea-pig taenia coli induced by field stimulation and nicotine, 497
electrophysiologic effects on isolated canine and rabbit atrial tissue, 81
- Lithium, stimulation of serotonin synthesis by, 325
- Liver
alcohol dehydrogenase, mouse, comparison of pyrazole and 4-bromopyrazole as inhibitors of, 199
cholesterol biosynthesis, regulation by clofibrate administration, 361
damage, carbon tetrachloride-induced, effects on hepatic transport of ouabain in rat, 589
glycogen, in rat, effect of carbon tetrachloride on metabolism of, 383
human, microsomes, oxidative drug metabolism in, 580
kidney, blood and, of dogs and rats, *in vitro* metabolism of N-methylcarbamates, Zectran and Mesurol, by, 371
lysosomes, isolated, glucocorticoids and vitamin E attenuation of thermal labilization of, 609
microsomes, rat, interaction of drugs with conjugation of tetrahydrocortisone in, 602
rat, levels of LSD in, 625
- Long, J. P., *see* Dretchen, K., 192
- Lukas, G., Brindle, S. D. and Greengard, P.: The

- route of absorption of intraperitoneally administered compounds, 562
- Lum, B. K. B., *see* Heilman, R. D., 63
- Lung, vessels, responses to adenosine diphosphate, 549
- Lynn, R., *see* Gerber, N., 567
- Lysergic acid diethylamide, in rat, tolerance to behavioral effect of, and cross-tolerance to mescaline, 625
- Lysosomes, hepatic, isolated, glucocorticoids and vitamin E attenuation of thermal labilization of, 609
- Man
- adenine-, guanine- and uridine-5'-phosphonucleotides in blood platelets and storage organelles of, 210
 - evidence for activation of adenyl cyclase by separate *beta* adrenergic and prostaglandin receptors in leukocytes, 1
 - liver microsomes, oxidative drug metabolism in, 580
- Mandel, W. J. and Bigger, J. T., Jr.: Electrophysiologic effects of lidocaine on isolated canine and rabbit atrial tissue, 81
- Mannerling, G. J., *see* Cumming, J. F., 595
- Mannitol, ascorbic acid, isoascorbic acid and, protective effect against tetracycline-induced nephrotoxicity, 152
- Marcus, F. I., Nimmo, L., Kapadia, G. G. and Goldsmith, C.: The effect of acute hypokalemia on the myocardial concentration and body distribution of tritiated digoxin in the dog, 271
- Markis, J. E. and Koch-Weser, J.: Characteristics and mechanism of inotropic and chronotropic actions of bretylium tosylate, 94
- Martínez, J. R.: Action of ouabain on submaxillary secretion in the dog, 616
- Maruyama, Y., Hayashi, G., Smits, S. E. and Takemori, A. E.: Studies on the relationship between 5-hydroxytryptamine turnover in brain and tolerance and physical dependence in mice, 20
- Masters, B. S. S., *see* Nelson, E. B., 580
- Maxwell, R. A., *see* Salama, A. I., 474
- McClung, H. W., *see* Cumming, J. F., 595
- McMillan, D. E., *see* Frankenheim, J. M., 241
- McKennis, H., Jr., *see* Konzett, H., 122
- Melmon, K. L., *see* Bourne, H. R., 1
- Membranes, nictitating, cat, effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on norepinephrine contents of, 450
- Mescaline, cross-tolerance to, and tolerance to behavioral effect of lysergic acid diethylamide in rat, 625
- Mesuroil, Zectran and, *in vitro* metabolism by liver, kidney and blood of dogs and rats, 371
- Metabolism
- component, absence in development of tolerance to LSD and cross-tolerance to mescaline in rat, 625
 - dose-dependent, of 5,5-diphenylhydantoin in rat, study using new method for isolation and quantitation of metabolites *in vivo* and *in vitro*, 567
 - in vitro*, of N-methylcarbamates, Zectran and Mesuroil, by liver, kidney and blood of dogs and rats, 371
 - of calcium in cat heart, effect of ouabain on, 259
 - of 5-hydroxytryptamine in mouse brain, relation to physical dependence, 20
 - of iophenoxic acid in dog, 173
 - of liver glycogen in rat, effect of carbon tetrachloride on, 383
 - of ³H-norepinephrine released from adrenergic neuron, effect of tyramine, amphetamine and metaraminol, 464
 - oxidative drug, in human liver microsomes, 580
 - relationship with cardiac toxicity of daunomycin and related compounds, 216
- Metabolite(s)
- catecholamine, as cause of peripheral and central cardiovascular actions of L(-)-dopa, 517
 - of betahistine, vascular responses and, in forelimb of dog, 122
- Metaraminol, tyramine, amphetamine and, effect on metabolic disposition of ³H-norepinephrine released from adrenergic neuron, 464
- Methotrexate, effects on various parameters in adjuvant arthritic rats, 223
- Methoxamine, intestinal relaxation in rabbit and sheep jejunum, comparison with dopamine, 63
- N-Methylcarbamates, Zectran and Mesuroil, *in vitro* metabolism by liver, kidney and blood of dogs and rats, 371
- α -Methyltyrosine, electrical stimulation, desmethylimipramine and, on norepinephrine contents of neuronal cell bodies and terminals, 450
- Mhatre, R., Herman, E., Huidobro, A. and Waravdekar, V.: The possible relationship between metabolism and cardiac toxicity of daunomycin and related compounds, 216
- Mice
- comparison of pyrazole and 4-bromopyrazole as inhibitors of alcohol dehydrogenases in, 199
 - effect of chlorpromazine on toxicity and biotransformation of parathion in, 395
 - hamsters and, antischistosomal activity of nitrovinylfuran derivative (SQ 18,506) in, 402
 - tolerance and physical dependence in, relationship to 5-hydroxytryptamine turnover in brain, 20

- Microsomes
 human, liver, oxidative drug metabolism in, 580
 rat, liver, interaction of drugs with conjugation of tetrahydrocortisone in, 602
- Miller, K. W. and Dingell, J. V.: The interaction of drugs with the conjugation of tetrahydrocortisone and a method for the measurement of the formation of its glucuronide, *in vitro*, 602
- Misher, A., *see* Walz, D. T., 223
- Mitchell, C. L., *see* Nakamura, J., 232
- MK486, influence on cardiovascular effects of L(-)-dopa, 517
- Molinoff, P. B., Weinshilbom, R. and Axelrod, J.: A sensitive enzymatic assay for dopamine- β -hydroxylase, 425
- Molinoff, P. B., *see* Brimijoin, S., 417
- Monoamine oxidase, inhibition, effect on concentration of 5-hydroxytryptamine in myenteric plexus of guinea-pig ileum, 311
- Moore, K. E., *see* Bhatnagar, R. K., 450
- Moore, P. F., *see* Iorio, L. C., 509
- Moran, N. C., *see* Koerker, R. L., 482
- Morphine
 pentobarbital, chlorpromazine and, effects on bioelectrical potentials evoked in brain stem of cat by electrical stimulation of gingiva and tooth pulp, 232
 quantitative determination in serum by radioimmunoassay, 253
 tolerance and physical dependence in mice, relationship to 5-hydroxytryptamine turnover in brain, 20
- Mudge, G. H., Strewler, G. J., Jr., Desbiens, N., Berndt, W. O. and Wade, D. N.: Excretion and distribution of iophenoxic acid, 159
- Mudge, G. H., *see* Wade, D. N., 173
- Muscle(s)
 frog and cat, pharmacology of *d*- and *l*-carnitine and *d*- and *l*-acetylcarnitine in, comparison with choline and acetylcholine, 331
 papillary, kitten, inotropic and chronotropic effects of bretylium on, 94
 rectus abdominus, frog, antinicotinic action of benzyltrimethylammonium bromide in, 192
 sartorius, frog, twitch potentiation by tetraalkylammonium ions in, 631
 smooth, activation of glycogen phosphorylase in, 299
 smooth, contractility, mechanisms of zinc-induced changes, 282
 smooth, zinc content and accumulation in rat uterus and their relation to contractility changes from zinc and ouabain, 290
 taenia coli, guinea pig, adrenergic mechanisms in relaxation *in vitro* of, 497
- Muscle relaxants, centrally acting, diazepam and tybamate, locus of action, 350
- Myenteric plexus, of guinea-pig ileum, histochemical study of synthesis and uptake of 5-hydroxytryptamine by, 311
- Myocardium
 concentration, and body distribution of tritiated digoxin in dog, effect of acute hypokalemia on, 271
 embryonic chick, autonomic receptor mechanisms in, 73
- Nagasawa, J., Spiegelstein, M. Y. and Kao, C. Y.: Cardiovascular actions of saxitoxin, 103
- Nagasawa, J., *see* Kao, C. Y., 110
- Nakamura, J. and Mitchell, C. L.: The effects of morphine, pentobarbital and chlorpromazine on bioelectrical potentials evoked in the brain stem of the cat by electrical stimulation of the gingiva and tooth pulp, 232
- Namm, D. H.: The activation of glycogen phosphorylase in arterial smooth muscle, 299
- Náquira, C., *see* Bueding, E., 402
- Nelson, E. B., Raj, P. P., Belfi, K. J. and Masters, B. S. S.: Oxidative drug metabolism in human liver microsomes, 580
- Nephrotoxicity, tetracycline-induced, protective effect of ascorbic acid, isoascorbic acid and mannitol against, 152
- Nerve
 adrenergic, in rat cerebral cortex, molecular requirements for inhibition of uptake of racemic ^3H -norepinephrine by tricyclic antidepressants and related compounds in, 474
 endings, adrenergic, accumulation of 5-hydroxytryptamine in vesicles containing norepinephrine in rat vas deferens, 30
 endings, adrenergic, selective increase of norepinephrine in rat pineal gland consecutive to depletion of neuronal 5-hydroxytryptamine, 42
 hypogastric, stimulation, roles of tyrosine hydroxylase and new protein synthesis in acceleration of catecholamine formation in guinea-pig vas deferens after, 442
 sympathetic, cardiac, stimulation, in dog, inability of cocaine to potentiate responses to, 482
 sympathetic, innervating vas deferens and seminal vesicle of guinea pig, chemical and histochemical studies on, 432
- Neuromuscular block, depolarizing, 339
- Neuron, adrenergic, effect of tyramine, amphetamine and metamadol on metabolic disposition of ^3H -norepinephrine released from, 464
- Nicotine
 effect of benzyltrimethylammonium bromide on responses to, 192
 -induced relaxation of guinea-pig taenia coli, 497

- ¹⁴C-Nicotine, mechanisms of distribution in rat submaxillary gland *in vitro*, 180
- Nictitating membrane(s)
 cat, early pre- and postjunctional effects of 6-hydroxydopamine, 49
 cat, effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on norepinephrine contents of, 450
- Nimmo, L., *see* Marcus, F. I., 271
- Niridazole, antischistosomal activity in mice and hamsters, 402
- Nitrovinylfuran derivative
 (SQ 18,506), antischistosomal activity in mice and hamsters, 402
 (SQ 18,506), antischistosomal activity in rhesus monkeys, 411
- Norepinephrine
 -containing nerve vesicles, in rat vas deferens, accumulation of 5-hydroxytryptamine in, 30
 contents of neuronal cell bodies and terminals, effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on, 450
 effects on autonomic receptor mechanisms in embryonic chick myocardial cell cultures, 73
 increased formation in guinea-pig vas deferens after hypogastric nerve stimulation, 442
 increase in rat pineal gland consecutive to depletion of neuronal 5-hydroxytryptamine in rat pineal gland, 42
 -induced rise in blood pressure, effect of tolbutamide on, 130
 influence of cocaine on responses to cardiac sympathetic nerve stimulation and, 482
 in rat heart, effects of 6-hydroxydopamine on, 417
 intestinal relaxation in rabbit and sheep jejunum, comparison with dopamine, 63
 release from sympathetic nerve endings, effect of bretylium, 94
- ³H-Norepinephrine
 intracisternal, fate in brain and spinal cord of rabbit, 8
 racemic, molecular requirements for inhibition of uptake into rat cerebral cortex slices by tricyclic antidepressants and related compounds, 474
 released from adrenergic neuron, effect of tyramine, amphetamine and metamaminol on metabolic disposition of, 464
- Nortriptyline, effect on conjugation of tetrahydrocortisone, 602
- Osborne, M. W., Wenger, J. J. and Willems, W.: The cardiovascular pharmacology of L(-)-dopa: Peripheral and central effects, 517
- Ouabain
 action on submaxillary secretion in dog, 616
 effect on washout and uptake of calcium in isolated cat heart, 259
 in rat, effects of carbon tetrachloride-induced liver damage on hepatic transport of, 589
 zinc content and accumulation in rat uterus and their relation to contractility changes from, 290
- Pal, N., *see* Goldstein, D. B., 199
- Papillary muscles, kitten, inotropic and chronotropic effects of bretylium on, 94
- Paraoxon, in mice, effect of chlorpromazine on toxicity and biotransformation of, 395
- Parathion, in mice, effect of chlorpromazine on toxicity and biotransformation of, 395
- Pennington, D. G., *see* Hyman, A. L., 549
- Pentobarbital, morphine, chlorpromazine and, effects on bioelectrical potentials evoked in brain stem of cat by electrical stimulation of gingiva and tooth pulp, 232
- Perez-Cruet, J., Tagliamonte, A., Tagliamonte, P. and Gessa, G. L.: Stimulation of serotonin synthesis by lithium, 325
- Phenobarbital, effect on metabolism of 5,5-diphenylhydantoin in rat, 567
- Phentolamine, effects on relaxation of guinea-pig taenia coli induced by field stimulation and nicotine, 497
- Phenylbutazone, effect on thermal labilization of hepatic lysosomes, 609
- Phenylephrine, effects on autonomic receptor mechanisms in embryonic chick myocardial cell cultures, 73
- Phenylethylamine, use in assay for dopamine- β -hydroxylase, 425
- 5'-Phosphonucleotides, in blood platelets and storage organelles of various species, 210
- Phosphorylase, glycogen, activation in arterial smooth muscle, 299
- Pigeons, rats and, effects of *l*- Δ^9 - and *l*- Δ^8 -*trans*-tetrahydrocannabinol and cannibinol on schedule-controlled behavior of, 241
- Pineal gland, rat, selective increase of norepinephrine consecutive to depletion of neuronal 5-hydroxytryptamine in, 42
- Plasma
 cholesterol concentration, effect of clofibrate on, 361
 concentration of iophenoxic acid, effect on biliary and urinary excretion, 159
 effect of carbon tetrachloride on concentration of ouabain in, 589
 mice, effect of chlorpromazine on levels of parathion and paraoxon in, 395
 procedure for immunoassay of morphine in, 253
 sodium, renal excretion of electrolytes and water and, effects of prolonged administration of vasopressin, 141

- Platelets, blood, and storage organelles of various species, adenine-, guanine- and uridine-5'-phosphonucleotides in, 210
- Pletscher, A., *see* Goetz, U., 210
- Polacek, I., *see* Daniel, E. E., 282
- Polec, R. B., Yeh, S. D. and Shils, M. E.: Protective effect of ascorbic acid, isoascorbic acid and mannitol against tetracycline-induced nephrotoxicity, 152
- Pollack, S. H. and Brown, J. H.: Studies on the acute inflammatory response. III. Glucocorticoids and vitamin E (*in vivo*) attenuate thermal labilization of isolated hepatic lysosomes, 609
- Potassium, transport in dog submaxillary gland, effect of ouabain, 616
- Potassium chloride, effect of benzyltrimethylammonium bromide on responses to, 192
- Prednisolone, effects on various parameters in adjuvant arthritic rats, 223
- Progesterone, intraperitoneal, route of absorption, 562
- Propranolol
 - antagonism of quinterenol effects, 509
 - effect on responses to bretylium in myocardium, 94
 - effects in relaxation of guinea-pig taenia coli induced by field stimulation and nicotine, 497
- Prostaglandin(s)
 - receptors, *beta* adrenergic and, evidence for activation of adenylyl cyclase in human leukocytes by, 1
 - E₁ and E₂, bronchodilator activity, 541
- Protein, synthesis, new, tyrosine hydroxylase and, roles in acceleration of catecholamine formation in guinea-pig vas deferens after hypogastric nerve stimulation, 442
- Puromycin, effect on catecholamine formation in guinea-pig vas deferens after hypogastric nerve stimulation, 442
- Putney, J. W., Jr. and Borzelleca, J. F.: On the mechanisms of ¹⁴C-nicotine distribution in rat submaxillary gland *in vitro*, 180
- Pyrazole, comparison with 4-bromopyrazole as inhibitor of alcohol dehydrogenases in mice, 199
- Quinterenol, unique *beta* adrenergic stimulation and blockade by, 509
- Rabbit(s)
 - adenine-, guanine- and uridine-5'-phosphonucleotides in blood platelets and storage organelles of, 210
 - antinicotinic actions of benzyltrimethylammonium bromide in, 192
 - aortic strips, activation of arterial glycogen phosphorylase in, 299
 - atrial tissue, dog and, isolated, electrophysiologic effects of lidocaine, 81
 - brain and spinal cord, fate of intracisternal norepinephrine-³H in, 8
 - jejunum, sheep and, relaxation produced by dopamine, 63
- Raj, P. P., *see* Nelson, E. B., 580
- Rangno, R. E., *see* Gerber, N., 567
- Rat(s)
 - adjuvant-induced arthritis in, drug effects on physiologic, biochemical and immunologic parameters, 223
 - cerebral cortex slices, molecular requirements for inhibition of uptake of racemic ³H-norepinephrine by tricyclic antidepressants and related compounds in, 474
 - determination of morphine in serum by radioimmunoassay, 253
 - diaphragm, depolarizing neuromuscular block in, 339
 - dogs and, *in vitro* metabolism of N-methylcarbamates, Zectran and Mesurol, by liver, kidney and blood of, 371
 - early pre- and postjunctional effects of 6-hydroxydopamine, 49
 - effect of tyramine, amphetamine and metaminalol on metabolic disposition of ³H-norepinephrine released from adrenergic neuron in, 464
 - effects of carbon tetrachloride-induced liver damage on hepatic transport in, 589
 - effects of carbon tetrachloride on metabolism of liver glycogen in, 383
 - glucocorticoids and vitamin E attenuation of thermal labilization of isolated hepatic lysosomes in, 609
 - interaction of drugs with conjugation of tetrahydrocortisone and method for measurement of formation of its glucuronide *in vitro*, 602
 - pigeons and, effects of *l*- Δ^9 - and *l*- Δ^8 -*trans*-tetrahydrocannabinol and cannibinol on schedule-controlled behavior of, 241
 - pineal gland, selective increase of norepinephrine consecutive to depletion of neuronal 5-hydroxytryptamine in, 42
 - protective effect of ascorbic acid, isoascorbic acid and mannitol against tetracycline-induced nephrotoxicity in, 152
 - regulation of hepatic cholesterol biosynthesis by clofibrate administration in, 361
 - route of absorption of intraperitoneally administered compounds in, 562
 - stimulation of serotonin synthesis by lithium in, 325
 - study of dose-dependent metabolism of 5,5-diphenylhydantoin using new method for isolation and quantitation of metabolites *in vivo* and *in vitro*, 567

- submaxillary gland, mechanisms of ^{14}C -nicotine distribution *in vitro*, 180
- sympathetic ganglia, effects of 6-hydroxydopamine on activity of tyrosine hydroxylase and dopamine- β -hydroxylase in, 417
- tolerance to behavioral effect of lysergic acid diethylamide and cross-tolerance to mescaline in, 625
- uteri, mechanisms of zinc-induced contractility changes in, 282
- uterus, unique *beta* adrenergic stimulation and blockade by quinterenol in, 509
- uterus, zinc content and accumulation and their relation to contractility changes from zinc and ouabain in, 290
- vas deferens, adrenergic nerve endings, accumulation of 5-hydroxytryptamine in vesicles containing norepinephrine, 30
- Reserpine, effect on responses to bretylium in myocardium, 94
- Reuning, R. H. and Schanker, L. S.: Effects of carbon tetrachloride-induced liver damage on hepatic transport of ouabain in the rat, 589
- Rhesus monkeys, antischistosomal activity of nitrovinylfuran derivative (SQ 18,506) in, 411
- Ro 4-4602, influence on cardiovascular effects of L(-)-dopa, 517
- Robinson, R. G. and Gershon, M. D.: Synthesis and uptake of 5-hydroxytryptamine by the myenteric plexus of the guinea-pig ileum: A histochemical study, 311
- Rose, G., *see* Baeding, E., 402
- Rosenthal, M. E., Dervinis, A. and Kassirich, J.: Bronchodilator activity of the prostaglandins E_1 and E_2 , 541
- Sadun, E. H., *see* Erickson, D. G., 411
- Salama, A. I., Insalaco, J. R. and Maxwell, R. A.: Concerning the molecular requirements for the inhibition of the uptake of racemic ^3H -norepinephrine into rat cerebral cortex slices by tricyclic antidepressants and related compounds, 474
- Salivary gland, cat; effects of electrical stimulation, α -methyltyrosine and desmethylimipramine on norepinephrine contents of, 450
- Sartorius muscle, frog, twitch potentiation by tetraalkylammonium ions in, 631
- Saxitoxin, cardiovascular actions, 103
- Schanker, L. S., *see* Reuning, R. H., 589
- Schistosoma*
- strains, in mice and hamsters, effect of SQ 18,506 on, 402
- strains, in rhesus monkeys, effect of SQ 18,506 on, 411
- Schussler, G. C.: Diazepam competes for thyroxine binding sites, 204
- Seifter, E., *see* Blum, K., 331
- Seifter, J., *see* Blum, K., 331
- Seminal vesicle, vas deferens and, of guinea pig, chemical and histochemical studies on sympathetic innervation of, 432
- Serotonin, *see* 5-Hydroxytryptamine
- Serum, quantitative determination of morphine by radioimmunoassay in, 253
- Sheep, jejunum, rabbit and, intestinal relaxation produced by dopamine, 63
- Shils, M. E., *see* Polec, R. B., 152
- SKF 525A, effect on conjugation of tetrahydrocortisone, 602
- Smits, S. E., *see* Maruyama, Y., 20
- Smooth muscle
- arterial, activation of glycogen phosphorylase in, 299
- contractility, mechanisms of zinc-induced changes, 282
- zinc content and accumulation in rat uterus and their relation to contractility changes from zinc and ouabain, 290
- Sodium
- plasma, renal excretion of electrolytes and water and, effects of prolonged administration of vasopressin, 141
- transport in dog submaxillary gland, effect of ouabain, 616
- Sokoll, M. D., *see* Dretchen, K., 192
- Spector, S.: Quantitative determination of morphine in serum by radioimmunoassay, 253
- Spiegelstein, M. Y.
- see* Kao, C. Y., 110
- see* Nagasawa, J., 103
- Spinal cord, rabbit, brain and, fate of intracisternal norepinephrine- ^3H in, 8
- SQ 18,506
- nitrovinylfuran derivative, antischistosomal activity in mice and hamsters, 402
- nitrovinylfuran derivative, antischistosomal activity in rhesus monkeys, 411
- Stefano, F. J. E., *see* Leitz, F. H., 464
- Steroids, non-steroids and, effect on anti-inflammatory response of polyarthritis in rats, 609
- Strewler, G. J., Jr.
- see* Mudge, G. H., 159
- see* Wade, D. N., 173
- Strother, A., *see* Wheeler, L., 371
- Submaxillary gland
- rat, mechanisms of ^{14}C -nicotine distribution *in vitro*, 180
- secretion in dog, action of ouabain, 616
- Succinylcholine, responses of rat diaphragm to, 339
- Sures, H. A., *see* Bailey, L. E., 259
- Sweetman, B. J., *see* Gerber, N., 567
- Sympathetic nerve
- cardiac, stimulation, in dog, inability of cocaine to potentiate responses to, 482

- innervating vas deferens and seminal vesicle of guinea pig, chemical and histochemical studies on, 432
- Taenia coli*, guinea pig, adrenergic mechanisms in relaxation *in vitro* of, 497
- Tagliamonti, A., *see* Perez-Cruet, J., 325
- Tagliamonte, P., *see* Perez-Cruet, J., 325
- Takemori, A. E., *see* Maruyama, Y., 20
- Tetraalkylammonium ions, twitch potentiation, contractures and alterations in calcium fluxes produced by, 631
- Tetrabutylammonium ions, effect on twitch response in frog sartorius muscles, 631
- Tetracycline-induced nephrotoxicity, protective effect of ascorbic acid, isoascorbic acid and mannitol against, 152
- Tetrahydrocannabinol, *l*- Δ^9 - and *l*- Δ^8 -*trans*-, cannabinol and, effects on schedule-controlled behavior of pigeons and rats, 241
- Tetrahydrocortisone, conjugation, interaction of drugs with, and method for measurement of formation of its glucuronide *in vitro*, 602
- Tetrapropylammonium ions, effect on twitch response in frog sartorius muscles, 631
- Tetrodotoxin
effects on relaxation of guinea-pig taenia coli induced by field stimulation and nicotine, 497
vasodilatory effects in cat, 110
- Thoa, N. B., Johnson, D. G., Kopin, I. J. and Weiner, N.: Acceleration of catecholamine formation in the guinea-pig vas deferens after hypogastric nerve stimulation: Roles of tyrosine hydroxylase and new protein synthesis, 442
- Thyroxine binding sites, diazepam competition for, 204
- Tolazoline, effects on relaxation of guinea-pig taenia coli induced by field stimulation and nicotine, 497
- Tolbutamide, effect on blood pressure, 130
- Tooth pulp, gingiva and, effects of morphine, pentobarbital and chlorpromazine on bioelectrical potentials evoked in brain stem of cat by electrical stimulation of, 232
- Trachea, atria and, guinea pig, unique *beta* adrenergic stimulation and blockade by quinterenol in, 509
- Travis, D. M.: Molecular CO₂ is inert on carotid chemoreceptor: Demonstration by inhibition of carbonic anhydrase, 529
- Triamcinolone acetonide, effect on thermal labilization of hepatic lysosomes, 609
- Triolo, A. J., *see* Vukovich, R. A., 395
- Triton X-100, effect on conjugation of tetrahydrocortisone, 602
- Tryptophan, concentration in rat brain, effect of lithium on, 325
- Tseng, T.-C. and Wang, S. C.: Locus of action of centrally acting muscle relaxants, diazepam and tybamate, 350
- Tybamate, diazepam and, centrally acting muscle relaxants, locus of action, 350
- Tyramine
amphetamine, metaraminol and, effect on metabolic disposition of ³H-norepinephrine released from adrenergic neuron, 464
use in assay for dopamine- β -hydroxylase, 425
- Tyrosine hydroxylase
dopamine- β -hydroxylase and, in sympathetic ganglia of rat, effects of 6-hydroxydopamine on activity of, 417
new protein synthesis and, roles in acceleration of catecholamine formation in guinea-pig vas deferens after hypogastric nerve stimulation, 442
- Uridine-5'-phosphonucleotides, adenine-, guanine- and, in blood platelets and storage organelles of various species, 210
- Urine
dog, excretion and distribution of iophenoxic acid in, 159
dog, metabolites of betahistine in, 122
metabolites of iophenoxic acid in, 173
- Uterus
rat, mechanisms of zinc-induced contractility changes in, 282
rat, unique *beta* adrenergic stimulation and blockade by quinterenol in, 509
rat, zinc content and accumulation and their relation to contractility changes from zinc and ouabain in, 290
- Vas deferens
guinea pig, roles of tyrosine hydroxylase and new protein synthesis in acceleration of catecholamine formation in, 442
rat, adrenergic nerve endings, accumulation of 5-hydroxytryptamine in vesicles containing norepinephrine, 30
seminal vesicle and, of guinea pig, chemical and histochemical studies on sympathetic innervation of, 432
- Vasopressin, prolonged administration, effects on plasma sodium and renal excretion of electrolytes and water, 141
- Vitamin E, glucocorticoids and, attenuation of thermal labilization of isolated hepatic lysosomes, 609
- Volle, R. L., *see* Henderson, E. G., 631
- Vukovich, R. A., Triolo, A. J. and Coon, J. M.: The effect of chlorpromazine on the toxicity and biotransformation of parathion in mice, 395

- Wade, D. N., Desbiens, N., Strewler, G. J., Jr., Berndt, W. O. and Mudge, G. H.: Metabolism of iophenoxic acid in the dog, 173
- Wade, D. N., *see* Mudge, G. H., 159
- Wakade, A. R. and Kirpekar, S. M.: Chemical and histochemical studies on the sympathetic innervation of the vas deferens and seminal vesicle of the guinea pig, 432
- Wales, J. K., Grant, A. M. and Wolff, F. W.: The effect of tolbutamide on blood pressure, 130
- Wals, D. T., DiMartino, M. J. and Misher, A.: Adjuvant-induced arthritis in rats. II. Drug effects on physiologic, biochemical and immunologic parameters, 223
- Wang, S. C., *see* Tseng, T.-C., 350
- Waravdekar, V., *see* Mhatre, R., 216
- Water, renal excretion, plasma sodium and, effects of prolonged administration of vasopressin on, 141
- Weiner, N., *see* Thoa, N. B., 442
- Weinshilboum, R., *see* Molinoff, P. B., 425
- Weisbrodt, N. W., *see* Weisenthal, L. M., 497
- Weisenthal, L. M., Hug, C. C., Jr., Weisbrodt, N. W. and Bass, P.: Adrenergic mechanisms in the relaxation of guinea-pig taenia coli *in vitro*, 497
- Weller, W. L., *see* Gerber, N., 567
- Wenger, J. J., *see* Osborne, M. W., 517
- Wheeler, L. and Strother, A.: *In vitro* metabolism of the N-methylcarbamates, Zectran and Mesurol, by liver, kidney and blood of dogs and rats, 371
- White, L. W.: Regulation of hepatic cholesterol biosynthesis by clofibrate administration, 361
- Willems, W., *see* Osborne, M. W., 517
- Winter, J. C.: Tolerance to a behavioral effect of lysergic acid diethylamide and cross-tolerance to mescaline in the rat: Absence of a metabolic component, 625
- Wolff, F. W., *see* Wales, J. K., 130
- Woolverton, W. C., *see* Hyman, A. L., 549
- Wurtman, R. J., *see* Chalmers, J. P., 8
- Yeh, S. D., *see* Polec, S. B., 152
- Zectran, Mesurol and, *in vitro* metabolism by liver, kidney and blood of dogs and rats, 271
- Zieher, L. M. and Jaim-Etcheverry, G.: Ultrastructural cytochemistry and pharmacology of 5-hydroxytryptamine in adrenergic nerve endings. II. Accumulation of 5-hydroxytryptamine in nerve vesicles containing norepinephrine in rat vas deferens, 30
- Zieher, L. M., *see* Jaim-Etcheverry, G., 42
- Zinc
content and accumulation in rat uterus and their relation to contractility changes from zinc and ouabain, 290
-induced contractility changes in rat uteri, mechanisms, 282