

INDEX

Volume 185, April-June 1973

- Acara, M., Kowalski, M. and Rennick, B.: Enhancement by hemicholinium-3 of choline and acetylcholine excretion by the renal tubule of the chicken, 254
- Acetylcholine
choline and, excretion by renal tubule of chicken, enhancement by hemicholinium-3, 254
-induced contractions in guinea-pig ileal smooth muscle, effects of ascorbate, 84
-induced responses in frog rectus abdominus muscle, effect of lanthanum, 551
inhibition of norepinephrine-³H release from sympathetic nerve endings in veins, 386
norepinephrine, potassium and, antagonism by protriptyline and desipramine of rat vas deferens response to, 540
release, cortical and reticular, alteration by ethanol *in vivo*, 583
responses of dog intestine to, 530
sensitivity of guanethidine-treated rat vas deferens to, 60
- Aconitine-induced automaticity of cat papillary muscle, effect of dose, tension, rate and endogenous catecholamines, 427
- Active avoidance responding, effects of 6-hydroxydopamine, evidence for involvement of brain dopamine, 358
- Adenosine triphosphatase
(Na⁺ + K⁺)-activated, brain, lack of relationship to tolerance development to ethanol in rat, 594
Na⁺, K⁺-activated, inhibition, dissociation of positive inotropic action of digitalis from, 1
possible role in maintenance of myocardial transmembrane Na⁺ and K⁺ gradients, 12
- Adrenal gland, liver, intestinal mucosa and, of untreated and 3-methylcholanthrene-treated rats, properties of benzpyrene hydroxylase in, 676
- Adrenergic potentiating effect of angiotensin, blockade by 1-Sar-8-Ala-angiotensin II, 486
- Adrenergic receptor(s)
beta, blocking activity in dogs after intravenous and intraportal vein administration of bunolol, propranolol, their *levo* isomers and sotalol, 395
mediating rise in cyclic adenosine monophosphate in rat cerebral cortex, characterization, 371
- Age, testosterone and, effect on calcium content and reactivity of guinea-pig vas deferens, 505
- Aghajanian, G. K., *see* Bunney, B. S., 560
- Akera, T., Rech, R. H., Marquis, W. J., Tobin, T. and Brody, T. M.: Lack of relationship between brain (Na⁺ + K⁺)-activated adenosine triphosphatase and the development of tolerance to ethanol in rats, 594
- Alcohol, dependence liability in monkeys, 307
- Aldehyde oxidase, mammalian liver, nitroreductase activity, 202
- Allen, D. O., Clark, J. F. and Ashmore, J.: Study of phosphodiesterase inhibitors on lipolysis, phosphodiesterase activity and cyclic 3',5'-adenosine monophosphate levels in isolated fat cells, 379
- Allen, P. A., *see* Tanz, R. D., 427
- Allen, T. A., *see* Cerami, A., 653
- Althaus, J. R., *see* Wolpert, M. K., 202
- δ -Aminolevulinic acid synthetase, cytochrome P-450 and, drug stimulation in chick embryo liver, 214
- Aminophylline
effect on Forssman reaction in guinea pig, 116
effect on imidazole response in rabbit atria, 29
- para*-Aminosalicylic acid transport from cerebrospinal fluid, 642
- Amphetamine
antipsychotic drugs and, effect on single cell activity in dopaminergic neurons, 560
hydroxylated metabolites and, effects on central noradrenergic mechanisms, 620
- d*-Amphetamine, effects on schedule-controlled key pressing and drinking in chimpanzee, 633
- Analgesia
morphine, antagonism by cyclic adenosine monophosphate, 336
morphine, effects of cyclic adenosine monophosphate, 347
morphine-induced, motor activity and, modification after alteration of cerebral amine levels, 317
- Angiotensin
adrenergic potentiating effect, blockade by 1-Sar-8-Ala-angiotensin II, 486

- responses of aortic strips from spontaneously hypertensive rats to, 406
- Angiotensin II, peripheral and central effects, antagonism by [1-sarcosine, 8-isoleucine]-angiotensin II, 35
- Aniline, effects on benzpyrene hydroxylation by liver, intestinal mucosa and adrenal from untreated and 3-methylcholanthrene-treated rats, 676
- Antidiuretic response to cyclophosphamide in man, 245
- Anti-inflammatory agents, tolmetin and McN-2891, pharmacologic evaluation, 127
- Antipsychotic drugs, amphetamine and, effect on single cell activity in dopaminergic neurons, 560
- Aortic strips from spontaneously hypertensive rats, etiology of contractility impairment of, 406
- Armstrong, F. B., Jr., *see* Leach, B. E., 479
- Arteries, canine, contractile response to norepinephrine, calcium pools utilized, 493
- Ascorbate, effects on contractile activity of ileal smooth muscle, 84
- Ashmore, J., *see* Allen, D. O., 379
- Aspirin, effect on Forssman reaction in guinea pig, 116
- Atria
 rabbit, effects of imidazole, 29
 rabbit, electrophysiologic effects of diphenidol, 447
- Axelrod, J., *see* Saavedra, J. M., 523
- Azer, M. and Kirkendall, W. M.: Proximal tubular rejection of sodium by furosemide, 235
- Barium
 effects on action potential and membrane current of sheep heart Purkinje fibers, 418
 responses of aortic strips from spontaneously hypertensive rats to, 406
- Bassett, A. L.
see Ten Eick, R. E., 12
see Wiggins, J. R., 457
- Benzocetamine, dependence liability in monkeys, 307
- Benzpyrene hydroxylase, properties in liver, intestinal mucosa and adrenal of untreated and 3-methylcholanthrene-treated rats, 676
- Bethanechol, responses of dog intestine to, 530
- Bhatnagar, R. K., *see* McKercher, T. C., 514
- Bilder, G. E. and Hess, M. E.: Studies on the negative chronotropic response to vagal stimulation in hyperthyroid rats, 468
- Biliary tree, rat, use of retrograde intrabiliary injection to study absorption of compounds from, 150
- Biogenic amine(s)
 narcotic effects and, modification of morphine-induced analgesia and motor activity after alteration of cerebral amine levels, 317
 narcotic effects and, serotonin turnover in rat after acute and chronic morphine administration, 328
 reduction in rat uterus, estrogen-induced, 514
- Bladder
 toad, sodium transport, inhibited by ouabain, effects of depolarization, 261
 urinary, vesical autonomic ganglia and, cat, actions of 5-hydroxytryptamine, 70
- Bloch, R., *see* Misra, A. L., 287
- Block, J. B., *see* Steele, T. H., 245
- Blood platelets, man, binding of cyproheptadine inhibited by phenothiazines and tricyclic antidepressants, 171
- Bounous, H., *see* Levitt, B., 24
- Bradykinin, effect on Forssman reaction in guinea pig, 116
- Brain
 dopamine, involvement in active avoidance responding, 358
 dopamine, involvement in growth and behavioral changes in developing rats, 609
 mouse, alteration in catecholamine levels, role in morphine withdrawal, 602
 rabbit, alteration of cortical and reticular acetylcholine release by ethanol *in vivo* in, 583
 rat, adrenergic receptors mediating rise in cyclic adenosine monophosphate in, 371
 rat, dopaminergic neurons, effect of antipsychotic drugs and amphetamine, 560
 rat, effect of amphetamine and its hydroxylated metabolites, 620
 rat, effect of drugs on tryptamine content, 523
 rat, (Na⁺ + K⁺)-activated adenosine triphosphatase, lack of relationship to tolerance development to ethanol, 594
 sites of precipitated abstinence in morphine-dependent rats, 108
 synaptosomes, rat, Ca⁺⁺ transport into, inhibition by diphenylhydantoin, 272
- Breese, G. R.
see Cooper, B. R., 358
see Smith, R. D., 609
- Bressler, R. C., *see* Cook, C. E., 696
- Breyer, U., *see* Gaertner, H. J., 195
- Brody, T. M., *see* Akera, T., 594
- Bumpus, F. M., *see* Sweet, C. S., 35
- Bunney, B. S., Walters, J. R., Roth, R. H. and Aghajanian, G. K.: Dopaminergic neurons: Effect of antipsychotic drugs and amphetamine on single cell activity, 560
- Bunolol, propranolol, sotalol and, *beta* adrenergic receptor blocking activity in dogs after intravenous and intraportal vein administration of, 395
- Burke, J. P., *see* McKercher, T. C., 514

- Burks, T. F.: Mediation by 5-hydroxytryptamine of morphine stimulant actions in dog intestine, 530
- Burnstock, G., *see* Evans, B., 60
- Butler, M., *see* Steinetz, B., 139
- Butler, S., *see* Walsler, M., 261
- Buxbaum, D. M., Yarbrough, G. G. and Carter, M. E.: Biogenic amines and narcotic effects. I. Modification of morphine-induced analgesia and motor activity after alteration of cerebral amine levels, 317
- Buxbaum, D. M., *see* Yarbrough, G. G., 328
- Byrd, L. D.: Effects of *d*-amphetamine on schedule-controlled key pressing and drinking in the chimpanzee, 633
- Cagin, N. A., *see* Levitt, B., 24
- Calcium
content, reactivity and, of guinea-pig vas deferens, effect of age and testosterone, 505
ion, transport into rat brain synaptosomes, inhibition by diphenylhydantoin, 272
pools utilized in contractile response of canine arterial and venous smooth muscle to norepinephrine, 493
-related actions in frog rectus abdominus muscle, inhibition by lanthanum, 551
- Canrenoate-K, spironolactone, canrenone and, pharmacokinetics in humans, 686
- Canrenone, spironolactone, canrenoate-K and, pharmacokinetics in humans, 686
- Carbamylcholine, effect on schistosome activity measured by new instrument, 177
- Carbon monoxide, effects on benzpyrene hydroxylation by liver, intestinal mucosa and adrenal from untreated and 3-methylcholanthrene-treated rats, 676
- Cardiovascular effects of angiotensin II, antagonism by [1-sarcosine, 8-isoleucine]angiotensin II, 35
- Carrageenan, effect on Forssman reaction in guinea pig, 116
- Carter, M. E., *see* Buxbaum, D. M., 317
- Cat(s)
determination of serum *d*-tubocurarine by radioimmunoassay in, 94
lumbar spinal cord, polysynaptic pathways and interneurons, effect of methoxyphenylethylamine, 572
papillary muscle, aconitine-induced automaticity, effect of dose, tension, rate and endogenous catecholamines, 427
spinal cord transection, alteration of effects and distribution of ouabain by, 24
splenic nerve, electrophysiological properties in relation to norepinephrine overflow, 49
transport and metabolism of salicylate in central nervous system studied *in vivo*, 276
urinary bladder and vesical autonomic ganglia, actions of 5-hydroxytryptamine, 70
ventricle, nicotine and potassium chloride contracture in, 457
- Catecholamine(s)
effect on schistosome activity measured by new instrument, 177
endogenous, effect on aconitine-induced automaticity of cat papillary muscle, 427
levels in mouse brain, role in morphine withdrawal, 602
stores in rat vas deferens, depletion by guanethidine, 60
- Central nervous system, *in vivo* study of transport and metabolism of salicylate in, 276
- Century, B.: A role of the dietary lipid in the ability of phenobarbital to stimulate drug detoxification, 185
- Cerami, A., Allen, T. A., Graziano, J. H., deFuria, F. G., Manning, J. M. and Gillette, P. N.: Pharmacology of cyanate. I. General effects on experimental animals, 653
- Cerami, A., *see* Graziano, J. H., 667
- Cerebrospinal fluid, transport of *para*-aminosalicylic acid from, 642
- Chicken
embryo liver, drug stimulation of δ -aminolevulinic acid synthetase and cytochrome P-450 in, 214
renal tubule, enhancement by hemicholinium-3 of choline and acetylcholine excretion by, 254
- Chimpanzee, effects of *d*-amphetamine on schedule-controlled key pressing and drinking in, 633
- Chlorethylazine, meclizine and, chronic administration to rats, accumulation of metabolite formed by piperazine ring cleavage, 195
- Chlordiazepoxide, dependence liability in monkeys, 307
- Chlormerodrin, tubular sites of action, 235
- Chloroform, dependence liability in monkeys, 307
- p*-Chlorophenylalanine
effect on morphine-induced analgesia and motor activity in rats, 317
effect on tryptamine content of rat tissues, 523
- Chlorothiazide, tubular sites of action, 235
- Chlorpromazine, dependence liability in monkeys, 307
- Choline
acetylcholine and, excretion by renal tubule of chicken, enhancement by hemicholinium-3, 254
effects in hyperthyroid rats, 468
- Chronotropic response, negative, to vagal stimulation in hyperthyroid rats, 468
- Cinti, D. L., *see* Jakobsson, S. V., 226
- Clark, J. F., *see* Allen, D. O., 379
- Cohen, M. and Pocelinko, R.: Renal transport

- mechanisms for the excretion of sulfisoxazole, 703
- Commarato, M. A., *see* Kaplan, H. R., 395
- Cook, C. E., Karim, A., Forth, J., Wall, M. E., Ranney, R. E. and Bressler, R. C.: Ethynodiol diacetate metabolites in human plasma, 696
- Cooper, B. R., Breese, G. R., Grant, L. D. and Howard, J. L.: Effects of 6-hydroxydopamine treatments on active avoidance responding: Evidence for involvement of brain dopamine, 358
- Cooper, B. R., *see* Smith, R. D., 609
- Cooperstein, S. J., *see* Pillsbury, S., 713
- Cromolyn sodium, effect on Forssman reaction in guinea pig, 116
- Cyanate
 pharmacology, effects on endocrine system, 667
 pharmacology, general effects on experimental animals, 653
- Cyclic adenosine monophosphate
 antagonism of morphine analgesia, 336
 effects on morphine tolerance and physical dependence, 347
 lipolysis, phosphodiesterase activity and, in isolated fat cells, effect of phosphodiesterase inhibitors, 379
 rise in rat cerebral cortex, adrenergic receptors mediating, 371
- Cyclic nucleotides, effect on schistosome activity measured by new instrument, 177
- Cycloheximide, prevention of accelerating effect of cyclic adenosine monophosphate on morphine tolerance and physical dependence development, 347
- Cyclophosphamide, antidiuretic response in man, 245
- Cyproheptadine-(N-methyl-¹⁴C), binding by human blood platelets, inhibition by phenothiazines and tricyclic antidepressants, 171
- Cysteine, effect on models of inflammatory disease in rat, 139
- Cytochrome P-450
 δ -aminolevulinic acid synthetase and, drug stimulation in chick embryo liver, 214
 -containing mono-oxygenase system in human kidney cortex microsomes, 226
- Dagcioglu, M., *see* Sadeé, W., 686
- Danilo, P., Jr., *see* Wiggins, J. R., 457
- deFuria, F. G., *see* Cerami, A., 653
- de Groat, W. C., *see* Saum, W. R., 70
- Dehydroascorbic acid, effect on permeability of pancreatic islet tissue *in vitro*, 713
- Dependence liability of sedative-hypnotic agents in monkeys, 307
- Depolarization, effect on susceptibility of toad bladder sodium transport to inhibition by ouabain, 261
- Desipramine, protriptyline and, antagonism of response of rat *vas deferens* to norepinephrine, acetylcholine and potassium, 540
- Diabetogenic effect of dehydroascorbic acid, mechanism, 713
- Diazepam, dependence liability in monkeys, 307
- Dibutyl cyclic adenosine monophosphate, antagonism of morphine analgesia, 336
- Diecke, F. P. J., *see* Greenberg, S., 493
- Dietary lipid, role in ability of phenobarbital to stimulate drug metabolism, 177
- Diethylstilbestrol, glucuronide conjugate and, absorption from intestines of 5- and 25-day-old rats, 163
- Diethylstilbestrol glucuronide, diethylstilbestrol and, absorption from intestines of 5- and 25-day-old rats, 163
- Digitalis, positive inotropic action, dissociation from inhibition of Na⁺, K⁺-activated adenosine triphosphatase, 1
- Dihydroxyphenylserine, effect on cyclic adenosine monophosphate antagonism of morphine analgesia, 341
- Dimethylphenylpiperazinium
 effect of age and testosterone on responses of guinea-pig *vas deferens* to, 505
 responses of dog intestine to, 530
- Dinitrophenol, effect on excretion of sulfisoxazole, 703
- Diphenidol, electrophysiologic effects in isolated cardiac tissue, 447
- Diphenylhydantoin, inhibition of Ca⁺⁺ transport into rat brain synaptosomes by, 272
- Diuretics, tubular sites of action, 235
- Dog(s)
 antagonism of effects of angiotensin II by [1-sarcosine, 8-isoleucine] angiotensin II in, 35
 arterial and venous smooth muscle contractile response to norepinephrine, calcium pools utilized, 493
beta adrenergic receptor blocking activity after intravenous and intraportal vein administration of bunolol, propranolol, their *levo* isomers and sotalol in, 395
 general effects of cyanate, 653
 hindpaw, blockade of adrenergic potentiating effect of angiotensin by 1-Sar-8-Ala-angiotensin II in, 486
 intestine, morphine stimulant actions, mediation by 5-hydroxytryptamine, 530
 proximal tubular rejection of sodium by furosemide in, 235
 Purkinje fibers, electrophysiologic effects of diphenidol, 447
 renal transport mechanisms for excretion of sulfisoxazole in, 703
 sympathetic nerve endings in veins, inhibition

- by acetylcholine of norepinephrine-³H release from, 386
- ventricle, correlation between inhibition of adenosine triphosphatase activity and electrophysiological activity of strophanthidin-3-bromoacetate in, 12
- ventricular conducting system, effects of procaine amide on electrophysiological properties of, 438
- L-Dopa, effect on cyclic adenosine monophosphate antagonism of morphine analgesia, 341
- Dopamine
- brain, involvement in active avoidance responding, 358
 - brain, involvement in growth and behavioral changes in developing rats, 609
 - metabolism in rat brain, altered by drugs, 560
 - norepinephrine and, role in naloxone-induced abstinence of morphine-dependent mice, 602
 - striatal, rat, effects of methamphetamine, 42
- Drinking, key pressing and, schedule-controlled, in chimpanzee, effects of *d*-amphetamine, 633
- Drug-nicotinic receptor interaction, stoichiometry, 649
- Electrophysiologic effects
- of diphenidol in isolated cardiac tissue, 447
 - of strophanthidin-3-bromoacetate, possible role of adenosine triphosphatase, 12
- Electrophysiological properties
- of canine ventricular conducting system, effects of procaine amide, 438
 - of splenic nerve in relation to norepinephrine overflow, 49
- Embryo, chick, liver, drug stimulation of δ -aminolevulinic acid synthetase and cytochrome P-450 in, 214
- Endocrine system, effects of cyanate, 667
- Epinephrine, effect of age and testosterone on responses of guinea-pig vas deferens to, 505
- Erickson, C. K. and Graham, D. T.: Alteration of cortical and reticular acetylcholine release by ethanol *in vivo*, 583
- Erythritol, absorption from rat biliary tree studied by retrograde intrabiliary injection, 150
- Estrogen-induced biogenic amine reduction in rat uterus, 514
- Ethanol
- alteration of cortical and reticular acetylcholine release *in vivo*, 583
 - effects on benzpyrene hydroxylation by liver, intestinal mucosa and adrenal from untreated and 3-methylcholanthrene-treated rats, 676
 - tolerance development in rats, lack of relationship to brain ($\text{Na}^+ + \text{K}^+$)-activated adenosine triphosphatase, 594
- N-Ethylmaleimide, effect on models of inflammatory disease in rat, 139
- Ethylmorphine, effects on benzpyrene hydroxylation by liver, intestinal mucosa and adrenal from untreated and 3-methylcholanthrene-treated rats, 676
- Ethynodiol diacetate, metabolites in human plasma, 696
- Evans, B., Iwayama, T. and Burnstock, G.: Long-lasting supersensitivity of the rat vas deferens to norepinephrine after chronic guanethidine administration, 60
- Fat cells, isolated, study of phosphodiesterase inhibitors on lipolysis, phosphodiesterase activity and cyclic adenosine monophosphate levels in, 379
- Ferguson, R. K., *see* Kayan, S., 300
- Ferrario, C. M., *see* Sweet, C. S., 35
- Ferrendelli, J. A., *see* Sohn, R. S., 272
- Fischer, L. J., Kent, T. H. and Weissinger, J. L.: absorption of diethylstilbestrol and its glucuronide conjugate from the intestines of five- and twenty-five-day-old rats, 163
- Fluorescence histochemistry
- use to study amine reduction in rat uterus, 514
 - use to study catecholamine uptake in rat vas deferens, 60
- Forsman anaphylaxis, in guinea pig, inhibitors of, 116
- Forth, J., *see* Cook, C. E., 696
- Frog, rectus abdominus muscle, inhibition by lanthanum of calcium-related actions in, 551
- Fujimoto, J. M., *see* Peterson, R. E., 150
- Furosemide, proximal tubular rejection of sodium by, 235
- Gaertner, H. J., Breyer, U. and Liomin, G.: Chronic administration of chlorcyclizine and meclizine to rats: Accumulation of a metabolite formed by piperazine ring cleavage, 195
- Ganglia, vesical autonomic, urinary bladder and, cat, actions of 5-hydroxytryptamine, 70
- Gardoeki, J. F., *see* Wong, S., 127
- Gaut, Z. N.: Binding of cyproheptadine-(N-methyl-¹⁴C) by human blood platelets: Inhibition by phenothiazines and tricyclic antidepressants, 171
- Gelband, H.
- see* Rosen, M. R., 438
 - see* Wiggins, J. R., 457
- Germain, G. S., *see* Leach, B. E., 479
- Giannina, T., *see* Steinetz, B., 139
- Gibb, J. W., *see* Koda, L. Y., 42
- Gillette, P. N.
- see* Cerami, A., 653
 - see* Rifkind, A. B., 214
- Goldfine, C., *see* Parker, R. B., 649

- Graham, D. T., *see* Erickson, C. K., 583
- Grant, L. D., *see* Cooper, B. R., 358
- Graziano, J. H., Thornton, Y. S., Leong, J. K. and Cerami, A.: Pharmacology of cyanate. II. Effects on the endocrine system, 667
- Graziano, J. H., *see* Cerami, A., 653
- Greenberg, S., Kadowitz, P. J., Schedl, H. P. and Long, J. P.: Effect of age and testosterone on calcium content and reactivity of guinea-pig vas deferens, 505
- Greenberg, S., Long, J. P. and Diecke, F. P. J.: Differentiation of calcium pools utilized in the contractile response of canine arterial and venous smooth muscle to norepinephrine, 493
- Guanethidine, chronic administration, supersensitivity of rat vas deferens to norepinephrine after, 60
- Guinea pig
 ileal smooth muscle contractile activity, effects of ascorbate, 84
 inhibitors of Forssman anaphylaxis, 116
 liver aldehyde oxidase, nitroreductase activity, 202
 muscle, drug-nicotinic receptor interaction, 649
 vas deferens, calcium content and reactivity, effect of age and testosterone, 505
- Haloperidol, effect on dopaminergic neurons in rat brain, 560
- Hammond, V., *see* Walser, M., 261
- Hamster, liver aldehyde oxidase, nitroreductase activity, 202
- Hayakawa, H. and Mandel, W. J.: Electrophysiologic effects of diphenidol in isolated cardiac tissue, 447
- Heart
 cat, nicotine and potassium chloride contracture in, 457
 rabbit, isolated, dissociation of positive inotropic action of digitalis from inhibition of Na^+ , K^+ -activated adenosine triphosphatase in, 1
 sheep, Purkinje fibers, effects of barium on action potential and membrane current of, 418
 tissue, isolated, electrophysiologic effects of diphenidol, 447
- Hemicholinium-3, enhancement of choline and acetylcholine excretion by renal tubule of chicken, 254
- Hess, M. E., *see* Bilder, G. E., 468
- Hillman, G. R. and Senft, A. W.: Schistosome motility measurements: Response to drugs, 177
- Hindpaw, dog, blockade of adrenergic potentiating effect of angiotensin by 1-Sar-8-Ala-angiotensin II in, 486
- Histamine, estrogen-induced reduction in rat uterus, 514
- Ho, I. K., Loh, H. H. and Way, E. L.: Effects of cyclic 3',5'-adenosine monophosphate on morphine tolerance and physical dependence, 347
- Ho, I. K., Loh, H. H. and Way, E. L.: Cyclic adenosine monophosphate antagonism of morphine analgesia, 336
- Hoffman, B. F., *see* Rosen, M. R., 438
- Hormones, rats, effects of cyanate, 667
- Horowitz, P. E. and Spector, S.: Determination of serum *d*-tubocurarine concentration by radioimmunoassay, 94
- Howard, J. L., *see* Cooper, B. R., 358
- p*-Hydroxyamphetamine, effects on central noradrenergic mechanisms, 620
- 6-Hydroxydopamine
 effect on active avoidance responding, evidence for involvement of brain dopamine, 358
 effect on growth and behavior in developing rats, evidence for involvement of brain dopamine, 609
- p*-Hydroxynorephedrine, effects on central noradrenergic mechanisms, 620
- 5-Hydroxytryptamine, *see also* Serotonin
 actions on urinary bladder and vesical autonomic ganglia in cat, 70
 mediation of morphine stimulant actions in dog intestine, 530
- 5-Hydroxytryptophan, effect on schistosome activity measured by new instrument, 177
- Hypertension
 in rats, etiology of contractility impairment of vascular smooth muscle, 406
 in rats, vasodepressor action of prostaglandins A_2 and E_2 possibly mediated by vagus, 479
- Hyperthyroidism in rats, negative chronotropic response to vagal stimulation, 468
- Ileum, guinea pig, contractile activity, effects of ascorbate, 84
- Imidazole, myocardial effects, 29
- Indomethacin
 effect on Forssman reaction in guinea pig, 116
 effect on models of inflammatory disease in rat, 139
- Inflammatory disease, models of, role of sulfhydryl groups, 139
- Interneurons, polysynaptic pathways and, in cat lumbar spinal cord, effect of methoxyphenylethylamine, 572
- Intestine(s)
 dog, morphine stimulant actions, mediation by 5-hydroxytryptamine, 530
 mucosa, liver, adrenal and, of untreated and 3-methylcholanthrene-treated rats, properties of benzpyrene hydroxylase in, 676
 of 5- and 25-day-old rats, absorption of diethylstilbestrol and its glucuronide conjugate from, 163

- Inulin, absorption from rat biliary tree studied by retrograde intrabiliary injection, 150
- Iproniazid, effect on tryptamine content of rat tissues, 523
- Iwayama, T., *see* Evans, B., 60
- Jakobsson, S. V. and Cinti, D. L.: Studies on the cytochrome P-450-containing mono-oxygenase system in human kidney cortex microsomes, 226
- Johns, D. G., *see* Wolpert, M. K., 202
- Joiner, P. D.: Effects of ascorbate on contractile activity of ileal smooth muscle, 84
- Jordan, L. M. and Willis, W. D., Jr.: Effect of methoxyphenylethylamine on polysynaptic pathways and on interneurons in the cat lumbar spinal cord, 572
- Kadowitz, P. J., *see* Greenberg, S., 505
- Kao, C. Y. and McCullough, J. R.: Electrophysiological properties of splenic nerve in relation to norepinephrine overflow, 49
- Kaplan, H. R. and Commarato, M. A.: Relative *beta* adrenergic receptor blocking activity in dogs after intravenous and intraportal vein administration: Bunolol, propranolol, their *levo* isomers and sotalol, 395
- Kappas, A., *see* Rifkind, A. B., 214
- Karim, A., *see* Cook, C. E., 696
- Kayan, S., Ferguson, R. K. and Mitchell, C. L.: An investigation of pharmacologic and behavioral tolerance to morphine in rats, 300
- Kemple, K. L., *see* Tanz, R. D., 427
- Kent, T. H., *see* Fischer, L. J., 163
- Key pressing, drinking and, schedule-controlled, in chimpanzee, effects of *d*-amphetamine, 633
- Khosla, M. C., *see* Sweet, C. S., 35
- Kidney
cortex microsomes, human, cytochrome P-450-containing mono-oxygenase system in, 226
transport mechanisms for excretion of sulfisoxazole, 703
- Kirkendall, W. M., *see* Azer, M., 235
- Knope, R., Moe, G. K., Saunders, J. and Tuttle, R.: Myocardial effects of imidazole, 29
- Koda, L. Y. and Gibb, J. W.: Adrenal and striatal tyrosine hydroxylase activity after methamphetamine, 42
- Kowalski, M., *see* Acara, M., 254
- Kuchii, M., *see* Shibata, S., 406
- Kurahashi, K., *see* Shibata, S., 406
- Lanthanum, inhibition of calcium-related actions in frog rectus abdominus muscle, 551
- Leach, B. E., Armstrong, F. B., Jr., Germain, G. S. and Muirhead, E. E.: Vasodepressor action of prostaglandins A₂ and E₂ in the spontaneously hypertensive rat (SH rat): Evidence for an action mediated by the vagus, 479
- Leong, J. K., *see* Graziano, J. H., 667
- Levitt, B., Cagin, N. A., Somberg, J., Bounous, H., Mittag, T. and Raines, A.: Alteration of the effects and distribution of ouabain by spinal cord transection in the cat, 24
- Liomin, G., *see* Gaertner, H. J., 195
- Lipolysis, phosphodiesterase activity, cyclic adenosine monophosphate levels and, in isolated fat cells, effect of phosphodiesterase inhibitors, 379
- Liver
chick embryo, drug stimulation of δ -amino-levulinic acid synthetase and cytochrome P-450 in, 214
drug metabolism, ability of phenobarbital to stimulate, role of dietary lipid, 185
intestinal mucosa, adrenal and, of untreated and 3-methylcholanthrene-treated rats, properties of benzpyrene hydroxylase in, 676
mammalian, aldehyde oxidase, nitroreductase activity, 202
- Loh, H. H.
see Ho, I. K., 336, 347
see Wei, E., 108
- Long, J. P., *see* Greenberg, S., 493, 505
- Lorenz, R. R., *see* Vanhoutte, P. M., 386
- Lorenzo, A. V., *see* Spector, R., 276, 642
- Man
antidiuretic response to cyclophosphamide in, 245
blood platelets, binding of cyproheptadine inhibited by phenothiazines and tricyclic antidepressants, 171
brain content of tryptamine, 523
determination of serum *d*-tubocurarine by radioimmunoassay in, 94
kidney cortex microsomes, cytochrome P-450-containing mono-oxygenase system in, 226
pharmacokinetics of spironolactone, canrenone and canrenoate-K in, 686
plasma, metabolites of ethynodiol diacetate in, 696
renal transport mechanisms for excretion of sulfisoxazole in, 703
- Mandel, W. J., *see* Hayakawa, H., 447
- Mannering, G. J., *see* Zampaglione, N. G., 676
- Manning, J. M., *see* Cerami, A., 653
- Mannitol
absorption from rat biliary tree studied by retrograde intrabiliary injection, 150
penetration into toadfish islet tissue, effect of dehydroascorbic acid, 713
- Marquis, W. J., *see* Akera, T., 594
- Maruyama, Y. and Takemori, A. E.: The role of dopamine and norepinephrine in the naloxone-

- induced abstinence of morphine-dependent mice, 602
- McCullough, J. R., *see* Kao, C. Y., 49
- McKercher, T. C., Van Orden, L. S., III, Bhatnagar, R. K. and Burke, J. P.: Estrogen-induced biogenic amine reduction in rat uterus, 514
- McN-2559, *see* Tolmetin
- McN-2891, tolmetin and, anti-inflammatory agents, pharmacologic evaluation, 127
- Mechlorethamine, effect on renal function in man, 245
- Meclizine, chlorcyclizine and, chronic administration to rats, accumulation of metabolite formed by piperazine ring cleavage, 195
- Membrane properties of sheep heart Purkinje fibers, effects of barium, 418
- Meprobamate, dependence liability in monkeys, 307
- Merker, C., *see* Rosen, M. R., 438
- Mescaline, 2,3,4-trimethoxyphenylethylamine and, stimulus properties, 101
- Metabolism
- drug, ability of phenobarbital to stimulate, role of dietary lipid, 185
 - of dopamine in rat brain, altered by drugs, 560
 - of serotonin in rat, effects of morphine, 328
 - physiological disposition and, of *levo*-methadone-1-³H in nontolerant and tolerant rats, 287
 - transport and, of salicylate in central nervous system studied *in vivo*, 276
- Metabolite(s)
- formed by piperazine ring cleavage after chronic administration of chlorcyclizine and meclizine to rats, 195
 - hydroxylated, of amphetamine, effects on central noradrenergic mechanisms, 620
 - of ethynodiol diacetate in human plasma, 696
- levo*-Methadone-1-³H, physiological disposition and metabolism in nontolerant and tolerant rats, 287
- Methamphetamine, adrenal and striatal tyrosine hydroxylase activity after, 42
- Methoxyphenylethylamine, effect on polysynaptic pathways and on interneurons in cat lumbar spinal cord, 572
- 3-Methylcholanthrene-treated rats, untreated and, properties of benzpyrene hydroxylase in liver, intestinal mucosa and adrenal of, 676
- α -Methyltyrosine, effects on morphine-induced analgesia and motor activity in rats, 317
- Methysergide, effects on actions of 5-hydroxytryptamine in urinary bladder and ganglia of cat, 70
- Mice
- cyclic adenosine monophosphate antagonism of morphine analgesia in, 336
 - effects of cyclic adenosine monophosphate on morphine tolerance and physical dependence in, 347
 - general effects of cyanate, 653
 - liver aldehyde oxidase, nitroreductase activity, 202
 - morphine-dependent, naloxone-induced abstinence, role of dopamine and norepinephrine, 602
- Microsomes, human kidney cortex, cytochrome P-450-containing mono-oxygenase system in, 226
- Misra, A. L., Mulé, S. J., Bloch, R. and Vadlamani, N. L.: Physiological disposition and metabolism of *levo*-methadone-1-³H in nontolerant and tolerant rats, 287
- Mitchell, C. L., *see* Kayan, S., 300
- Mittag, T., *see* Levitt, B., 24
- MK-486, effect on tryptamine content of rat tissues, 523
- Moe, G. K., *see* Knope, R., 29
- Monkeys
- general effects of cyanate, 653
 - rhesus, dependence liability of sedative-hypnotic agents in, 307
- Mono-oxygenase system, cytochrome P-450-containing, in human kidney cortex microsomes, 226
- Moore, M. M., *see* Perkins, J. P., 371
- Morphine
- absorption from rat biliary tree studied by retrograde intrabiliary injection, 150
 - acute and chronic, effect on serotonin turnover in rat, 328
 - analgesia, antagonism by cyclic adenosine monophosphate, 336
 - dependent mice, naloxone-induced abstinence, role of dopamine and norepinephrine, 602
 - dependent rats, brain sites of precipitated abstinence in, 108
 - effects on actions of 5-hydroxytryptamine in urinary bladder and ganglia of cat, 70
 - induced analgesia, motor activity and, modification after alteration of cerebral amine levels, 317
 - pharmacologic and behavioral tolerance in rats, 300
 - stimulant actions in dog intestine, mediation by 5-hydroxytryptamine, 530
 - tolerance, physical dependence and, effects of cyclic adenosine monophosphate, 347
- Muirhead, E. E., *see* Leach, B. E., 479
- Mulé, S. J., *see* Misra, A. L., 287
- Muscle
- frog rectus abdominus, inhibition by lanthanum of calcium-related actions in, 551
 - guinea pig, drug-nicotinic receptor interaction, 649

- papillary, cat, aconitine-induced automaticity, effect of dose, tension, rate and endogenous catecholamines, 427
 smooth, canine arterial and venous, contractile response to norepinephrine, calcium pools utilized, 493
 smooth, ileal, contractile activity, effects of ascorbate, 84
 smooth, vascular, from spontaneously hypertensive rats, etiology of contractility impairment of, 406
 ventricular, canine, effects of procaine amide on electrophysiological properties of, 438
 Myocardial effects of imidazole, 29
 Na⁺, K⁺ gradients, myocardial, role of adenosine triphosphatase in maintenance of, 12
 Naloxone
 -induced abstinence in morphine-dependent mice, role of dopamine and norepinephrine, 602
 -precipitated withdrawal of morphine-dependent rats, brain sites, 108
 pretreatment, effect on morphine-induced increase in serotonin turnover in rat, 328
 Naproxen, effect on Forssman reaction in guinea pig, 116
 Narcotic effects
 biogenic amines and, modification of morphine-induced analgesia and motor activity after alteration of cerebral amine levels, 317
 biogenic amines and, serotonin turnover in rat after acute and chronic morphine administration, 328
 Neurons, dopaminergic, single cell activity, effect of antipsychotic drugs and amphetamine, 560
 Nicotine
 effect of age and testosterone on responses of guinea-pig vas deferens to, 505
 -induced responses in frog rectus abdominus muscle, effect of lanthanum, 551
 potassium chloride and, contracture in mammalian ventricle, 457
 Nicotinic receptor-drug interaction, stoichiometry, 649
 Nitrofurazone, reduction by mammalian liver aldehyde oxidase, 202
 Nitroreductase activity of mammalian liver aldehyde oxidase, 202
 Noradrenergic mechanisms, central, effects of amphetamine and its hydroxylated metabolites, 620
 Norepinephrine
 acetylcholine, potassium and, antagonism by proprietyline and desipramine of rat vas deferens response to, 540
 contractile response of canine arterial and venous smooth muscle to, differentiation of calcium pools utilized, 493
 dopamine and, role in naloxone-induced abstinence of morphine-dependent mice, 602
 effect of age and testosterone on responses of guinea-pig vas deferens to, 505
 estrogen-induced reduction in rat uterus, 514
 -induced rise in cyclic adenosine monophosphate in rat cerebral cortex, interaction with adrenergic receptors, 371
 metabolism in rat brain, effects of amphetamine and its hydroxylated metabolites, 620
 overflow, electrophysiological properties of splenic nerve in relation to, 49
 responses of aortic strips from spontaneously hypertensive rats to, 406
 striatal, rat, effects of methamphetamine, 42
 supersensitivity in rat vas deferens after chronic guanethidine administration, 60
 Norepinephrine-³H, release from sympathetic nerve endings in veins, inhibition by acetylcholine, 386
 Norethindrone, as major human plasma metabolite of ethynodiol diacetate, 696
 NSD-1055, effect on tryptamine content of rat tissues, 523
 Okita, G. T., Richardson, F. and Roth-Schechter, B. F.: Dissociation of the positive inotropic action of digitalis from inhibition of sodium- and potassium-activated adenosine triphosphatase, 1
 Okita, G. T., *see* Ten Eick, R. E., 12
 Ouabain
 effects and distribution, alteration by spinal cord transection in cat, 24
 effects on Na⁺, K⁺-activated adenosine triphosphatase from isolated rabbit heart, 1
 inhibition of toad bladder sodium transport, effects of depolarization, 261
 responses of aortic strips from spontaneously hypertensive rats to, 406
 Oxazolam, dependence liability in monkeys, 307
 Pancreas, islet tissue, permeability *in vitro*, effect of dehydroascorbic acid, 713
 Papaverine, effect on lipolysis, phosphodiesterase activity and cyclic adenosine monophosphate levels in isolated fat cells, 379
 Pargyline, effect on cyclic adenosine monophosphate antagonism of morphine analgesia, 341
 Parker, R. B. and Goldfine, C.: Stoichiometry of the drug-receptor interaction, 649
 Pelczarska, A. B. and Roszkowski, A. P.: Inhibitors of Forssman guinea pig "anaphylaxis," 116
 Pentobarbital
 dependence liability in monkeys, 307

- effect on schistosome activity measured by new instrument, 177
- Perkins, J. P. and Moore, M. M.: Characterization of the adrenergic receptors mediating a rise in cyclic 3',5'-adenosine monophosphate in rat cerebral cortex, 371
- Perlapine, dependence liability in monkeys, 307
- Peterson, R. E. and Fujimoto, J. M.: Retrograde intrabiliary injection: Absorption of water and other compounds from the rat biliary tree, 150
- Pharmacokinetics of spironolactone, canrenone and canrenoate-K in humans, 686
- Pharmacology of cyanate, 653, 667
- Phenobarbital, ability to stimulate drug metabolism, role of dietary lipid, 185
- Phenothiazines
effect on dopaminergic neurons in rat brain, 560
inhibition of binding of cyproheptadine by human blood platelets, 171
- Phenylephrine, effect on Forssman reaction in guinea pig, 116
- Phosphodiesterase activity, lipolysis, cyclic adenosine monophosphate levels and, in isolated fat cells, effect of phosphodiesterase inhibitors, 379
- Physical dependence, morphine tolerance and, effects of cyclic adenosine monophosphate, 347
- Physiological disposition, metabolism and, of *levo*-methadone-1-³H in nontolerant and tolerant rats, 287
- Picrotoxin, effects on actions of 5-hydroxytryptamine in urinary bladder and ganglia of cat, 70
- Pillsbury, S., Watkins, D. and Cooperstein, S. J.: Effect of dehydroascorbic acid on permeability of pancreatic islet tissue *in vitro*, 713
- Piperazine ring cleavage, metabolite formed by, after chronic administration of chlorcyclizine and meclizine to rats, 195
- Plasma, human, metabolites of ethynodiol diacetate in, 696
- Platelets, human, binding of cyproheptadine inhibited by phenothiazines and tricyclic antidepressants, 171
- Pocelinko, R., *see* Cohen, M., 703
- Polysynaptic pathways, interneurons and, in cat lumbar spinal cord, effect of methoxyphenylethylamine, 572
- Potassium
effect of age and testosterone on responses of guinea-pig vas deferens to, 505
-induced responses in frog rectus abdominus muscle, effect of lanthanum, 551
nicotine and, contracture in mammalian ventricle, 457
norepinephrine, acetylcholine and, antagonism by protriptyline and desipramine of rat vas deferens response to, 540
responses of aortic strips from spontaneously hypertensive rats to, 406
- Probenecid, effect on excretion of sulfisoxazole, 703
- Procaine amide, effects on electrophysiological properties of canine ventricular conducting system, 438
- Propranolol
bunolol, sotalol and, *beta* adrenergic receptor blocking activity in dogs after intravenous and intraportal vein administration of, 395
effect on imidazole response in rabbit atria, 29
effect on potassium-induced contracture in cat ventricle, 457
- Prostaglandins A₂ and E₂, vasodepressor action in spontaneously hypertensive rat, evidence for action mediated by vagus, 479
- Protriptyline, desipramine and, antagonism of response of rat vas deferens to norepinephrine, acetylcholine and potassium, 540
- Pruss, T. P., *see* Wong, S., 127
- Purkinje fibers
canine, effects of procaine amide on electrophysiological properties of, 438
canine, electrophysiological effects of diphenidol, 447
sheep heart, effects of barium on action potential and membrane current of, 418
- Rabbit(s)
alteration of cortical and reticular acetylcholine release by ethanol *in vivo* in, 583
atria, effects of imidazole, 29
atria, electrophysiological effects of diphenidol, 447
heart, isolated, dissociation of positive inotropic action of digitalis from inhibition of Na⁺, K⁺-activated adenosine triphosphatase in, 1
liver aldehyde oxidase activity, nitroreductase activity, 202
papillary muscle, correlation between inhibition of adenosine triphosphatase activity and electrophysiological activity of strophanthidin-3-bromoacetate in, 12
transport and metabolism of salicylate in central nervous system studied *in vivo* in, 276
transport of *para*-aminosalicylic acid from cerebrospinal fluid of, 642
- Radioimmunoassay, determination of serum *d*-tubocurarine concentration by, 94
- Raines, A., *see* Levitt, B., 24
- Ranney, R. E., *see* Cook, C. E., 696
- Rat(s)
5- and 25-day-old, intestines, absorption of diethylstilbestrol and its glucuronide conjugate from, 163

- adrenal and striatal tyrosine hydroxylase activity after methamphetamine in, 42
- biliary tree, use of retrograde intrabiliary injection to study absorption of compounds from, 150
- brain, alteration of acetylcholine release by ethanol *in vivo* from, 583
- brain, dopaminergic neurons, effect of anti-psychotic drugs and amphetamine, 560
- brain synaptosomes, Ca⁺⁺ transport into, inhibition by diphenylhydantoin, 272
- cerebral cortex, adrenergic receptors mediating rise in cyclic adenosine monophosphate in, 371
- developing, involvement of brain dopamine in growth and behavioral changes in, 609
- effect of alteration of biogenic amine levels on morphine-induced analgesia and motor activity in, 317
- effects of amphetamine and its hydroxylated metabolites on central noradrenergic mechanisms in, 620
- endocrine system, effects of cyanate, 667
- general effects of cyanate, 653
- hyperthyroid, negative chronotropic response to vagal stimulation in, 468
- involvement of brain dopamine in active avoidance responding, 358
- isolated fat cells, study of phosphodiesterase inhibitors on lipolysis, phosphodiesterase activity and cyclic adenosine monophosphate levels in, 379
- kidney microsomes, role of cytochrome P-450, comparison with human kidney microsomes, 226
- lack of relationship between brain (Na⁺ + K⁺)-activated adenosine triphosphatase and tolerance development to ethanol in, 594
- liver aldehyde oxidase, nitroreductase activity, 202
- metabolite formed by piperazine ring cleavage after chronic administration of chlorcyclizine and meclizine to, 195
- morphine-dependent, brain sites of precipitated abstinence in, 108
- nontolerant and tolerant, physiological disposition and metabolism of *levo*-methadone-1-³H in, 287
- pharmacologic and behavioral tolerance to morphine in, 300
- pharmacologic evaluation of tolmetin and MeN-2891 in, 127
- role of dietary lipid in ability of phenobarbital to stimulate drug metabolism in, 185
- role of sulfhydryl groups in models of inflammatory disease in, 139
- serotonin turnover after acute and chronic morphine administration in, 328
- spontaneously hypertensive, etiology of contractility impairment of vascular smooth muscle from, 406
- spontaneously hypertensive, vasodepressor action of prostaglandins A₂ and E₂ possibly mediated by vagus, 479
- stimulus properties of mescaline and 2,3,4-trimethoxyphenylethylamine in, 101
- tissues, effect of drugs on tryptamine content, 523
- untreated and 3-methylcholanthrene-treated, properties of benzpyrene hydroxylase in liver, intestinal mucosa and adrenal of, 676
- uterus, estrogen-induced biogenic amine reduction, 514
- vas deferens, response to norepinephrine, acetylcholine and potassium, antagonism by protriptyline and desipramine, 540
- vas deferens, supersensitivity to norepinephrine after chronic guanethidine administration, 60
- Rech, R. H., *see* Akera, T., 594
- Renal tubule, chicken, enhancement by hemicholinium-3 of choline and acetylcholine excretion by, 254
- Rennick, B., *see* Acara, M., 254
- Reserpine
- effect on morphine-induced analgesia and motor activity in rats, 317
 - effect on tryptamine content of rat tissues, 523
- Retrograde intrabiliary injection, technique to study absorption of compounds from rat biliary tree, 150
- Richardson, F., *see* Okita, G. T., 1
- Rifkind, A. B., Gillette, P. N., Song, C. S. and Kappas, A.: Drug stimulation of δ -amino-levalinic acid synthetase and cytochrome P-450 *in vivo* in chick embryo liver, 214
- Robbins, J. B., *see* Tanz, R. D., 427
- Rosen, M. R., Merker, C., Gelband, H. and Hoffman, B. F.: Effects of procaine amide on the electrophysiological properties of the canine ventricular conducting system, 438
- Roszkowski, A. P., *see* Pelczarska, A. B., 116
- Roth, R. H., *see* Bunney, B. S., 560
- Roth-Schechter, B. F., *see* Okita, G. T., 1
- Saavedra, J. M. and Axelrod, J.: Effect of drugs on the tryptamine content of rat tissues, 523
- Sadeé, W., Dagecioglu, M. and Schröder, R.: Pharmacokinetics of spironolactone, canrenone and canrenoate-K in humans, 686
- Salicylate, transport and metabolism in central nervous system studied *in vivo*, 276
- Sanders-Bush, E., *see* Yarbrough, G. G., 328
- 1-Sar-8-Ala-angiotensin II, blockade of adrenergic potentiating effect of angiotensin by, 486
- [1-Sarcosine, 8-isoleucine]angiotensin II, antagonism of peripheral and central effects of angiotensin II by, 35

- Saum, W. R. and de Groat, W. C.: The actions of 5-hydroxytryptamine on the urinary bladder and on vesical autonomic ganglia in the cat, 70
- Saunders, J., *see* Knope, R., 29
- Schedl, H. P., *see* Greenberg, S., 505
- Schistosome motility measurements, response to drugs, 177
- Schröder, R., *see* Sadeé, W., 686
- Sedative-hypnotic agents, dependence liability in monkeys, 307
- Senft, A. W., *see* Hillman, G. R., 177
- Serotonin, *see also* 5-Hydroxytryptamine
brain levels, alteration, effects on morphine-induced analgesia and motor activity, 317
effect on schistosome activity measured by new instrument, 177
estrogen-induced reduction in rat uterus, 514
turnover in rat, after acute and chronic morphine administration, 328
- Serpick, A. A., *see* Steele, T. H., 245
- Sheep, heart Purkinje fibers, effects of barium on action potential and membrane current of, 418
- Shibata, J.: The effects of barium on the action potential and the membrane current of sheep heart Purkinje fibers, 418
- Shibata, S., Kurahashi, K. and Kuchii, M.: A possible etiology of contractility impairment of vascular smooth muscle from spontaneously hypertensive rats, 406
- SKF 525-A, effects on benzpyrene hydroxylation by liver, intestinal mucosa and adrenal from untreated and 3-methylcholanthrene-treated rats, 676
- Smith, R. D., Cooper, B. R. and Breese, G. R.: Growth and behavioral changes in developing rats treated intracisternally with 6-hydroxydopamine: Evidence for involvement of brain dopamine, 609
- Sohn, R. S. and Ferrendelli, J. A.: Inhibition of Ca^{++} transport into rat brain synaptosomes by diphenylhydantoin (DPH), 272
- Somberg, J., *see* Levitt, B., 24
- Song, C. S., *see* Rifkind, A. B., 214
- Spector, R. and Lorenzo, A. V.: The active transport of *para*-aminosalicylic acid from the cerebrospinal fluid, 642
- Spector, R. and Lorenzo, A. V.: The transport and metabolism of salicylate in the central nervous system: *In vivo* studies, 276
- Spector, S., *see* Horowitz, P. E., 94
- Spinal cord
lumbar, cat, polysynaptic pathways and interneurons, effect of methoxyphenylethylamine, 572
transection, cat, alteration of effects and distribution of ouabain by, 24
- Spironolactone, canrenone, canrenoate-K and, pharmacokinetics in humans, 686
- Splenic nerve, electrophysiological properties, in relation to norepinephrine overflow, 49
- Sodium
proximal tubular rejection by furosemide, 235
transport in toad bladder inhibited by ouabain, effects of depolarization, 261
- Sotalol, bunolol, propranolol and, *beta* adrenergic receptor blocking activity in dogs after intravenous and intraportal vein administration of, 395
- SQ 20,009, effect on lipolysis, phosphodiesterase activity and cyclic adenosine monophosphate levels in isolated fat cells, 379
- Steele, T. H., Serpick, A. A. and Block, J. B.: Antidiuretic response to cyclophosphamide in man, 245
- Steinetz, B., Giannina, T. and Butler, M.: The role of sulfhydryl groups in three models of inflammatory disease, 139
- Stimulus properties of mescaline and 2,3,4-trimethoxyphenylethylamine, 101
- Stoichiometry of drug-nicotinic receptor interaction, 649
- Strophanthidin, effect on Na^+ , K^+ -activated adenosine triphosphatase from isolated rabbit heart, 1
- Strophanthidin-3-bromoacetate
dissociation of electrophysiological and inotropic actions of, possible role of adenosine triphosphatase, 12
effect on Na^+ , K^+ -activated adenosine triphosphatase from isolated rabbit heart, 1
- Sulfisoxazole, excretion, renal transport mechanisms, 703
- Sulfobromophthalein, absorption from rat biliary tree studied by retrograde intrabiliary injection, 150
- Sulhydryl groups, role in models of inflammatory disease, 139
- Sulser, F., *see* Taylor, W. A., 620
- Sweet, C. S., Ferrario, C. M., Khosla, M. C. and Bumpus, F. M.: Antagonism of peripheral and central effects of angiotensin II by [1-sarcosine, 8-isoleucine]angiotensin II, 35
- Sympathetic nerve endings in veins, inhibition by acetylcholine of norepinephrine- 3H release from, 386
- Synaptosomes, rat brain, Ca^{++} transport into, inhibition by diphenylhydantoin, 272
- Takahashi, S., *see* Yanagita, T., 307
- Takemori, A. E., *see* Maruyama, Y., 602
- Tanz, R. D., Robbins, J. B., Kemple, K. L. and Allen, P. A.: Pharmacology of aconitine-induced automaticity of cat papillary muscle. I. Effect of dose, tension, rate and endogenous catecholamines, 427
- Taylor, W. A. and Sulser, F.: Effects of ampheta-

- mine and its hydroxylated metabolites on central noradrenergic mechanisms, 620
- Ten Bick, R. E., Bassett, A. L. and Okita, G. T.: Dissociation of electrophysiological and inotropic actions of strophanthidin-3-bromoacetate: Possible role of adenosine triphosphatase in the maintenance of the myocardial transmembrane Na^+ and K^+ gradients, 12
- Testosterone, age and, effect on calcium content and reactivity of guinea-pig vas deferens, 505
- Tetraethylammonium, effects on actions of 5-hydroxytryptamine in urinary bladder and ganglia of cat, 70
- Tetramethylammonium, effect of age and testosterone on responses of guinea-pig vas deferens to, 505
- Tetrodotoxin, effect on splenic nerve activity and norepinephrine overflow, 49
- Theophylline
antagonism of morphine analgesia
effect on lipolysis, phosphodiesterase activity and cyclic adenosine monophosphate levels in isolated fat cells, 379
- Thiols, effect on models of inflammatory disease in rat, 139
- Thornton, Y. S., *see* Graziano, J. H., 667
- Thyroxine, effects in hyperthyroid rats, 468
- Tissues, rat, effect of drugs on tryptamine content, 523
- Toad, bladder, sodium transport inhibited by ouabain, effects of depolarization, 261
- Toadfish, pancreatic islet tissue, permeability, effect of dehydroascorbic acid, 713
- Tobin, T., *see* Akera, T., 594
- Tolectin, *see* Tolmetin
- Tolerance
pharmacologic and behavioral, to morphine in rats, 300
to ethanol in rats, lack of relationship to brain (Na^+ + K^+)-activated adenosine triphosphatase, 594
- Tolmetin (Tolectin, McN-2559), McN-2891 and, anti-inflammatory agents, pharmacologic evaluation, 127
- Transport mechanisms, renal, for excretion of sulfisoxazole, 703
- Transport system
for *para*-aminosalicylic acid from cerebrospinal fluid, 642
for salicylate in central nervous system studied *in vivo*, 276
- Tricyclic antidepressants, inhibition of binding of cyproheptadine by human blood platelets, 171
- 2,3,4-Trimethoxyphenylethylamine, mescaline and, stimulus properties, 101
- Tryptamine, content of rat tissues, effect of drugs, 523
- Tryptophan, effect on cyclic adenosine monophosphate antagonism of morphine analgesia, 341
- l*-Tryptophan, effect on tryptamine content of rat tissues, 523
- d*-Tubocurarine, serum, determination by radioimmunoassay, 94
- Tuttle, R. *see* Knope, R., 29
- Tyce, G. M., *see* Vanhoutte, P. M., 386
- Tyrosine hydroxylase, activity, adrenal and striatal, after methamphetamine, 42
- Urea, absorption from rat biliary tree studied by retrograde intrabiliary injection, 150
- Uterus, rat, estrogen-induced biogenic amine reduction, 514
- Vadlamani, N. L., *see* Misra, A. L., 287
- Vagus nerve
in spontaneously hypertensive rat, possible mediator of vasodepressor effect of prostaglandins A_2 and E_2 , 479
stimulation, in hyperthyroid rats, negative chronotropic response, 468
- Vanhoutte, P. M., Lorenz, R. R. and Tyce, G. M.: Inhibition of norepinephrine- ^3H release from sympathetic nerve endings in veins by acetylcholine, 386
- Van Orden, L. S., III, *see* McKercher, T. C., 514
- Vas deferens
guinea pig, calcium content and reactivity, effect of age and testosterone, 505
rat, response to norepinephrine, acetylcholine and potassium, antagonism by protriptyline and desipramine, 540
rat, supersensitivity to norepinephrine after chronic guanethidine administration, 60
- Vasodepressor action of prostaglandins A_2 and E_2 in spontaneously hypertensive rat possibly mediated by vagus, 479
- Veins
canine, contractile response to norepinephrine, calcium pools utilized, 493
dogs, sympathetic nerve endings, inhibition by acetylcholine of norepinephrine- ^3H release from, 386
- Ventricle, cat, nicotine and potassium chloride contracture in, 457
- Ventricular conducting system, canine, effects of procaine amide on electrophysiological properties of, 438
- Wall, M. E., *see* Cook, C. E., 696
- Walser, M., Hammond, V. and Butler, S.: Depolarization increases the susceptibility of toad bladder sodium transport to inhibition by ouabain, 261
- Walters, J. R., *see* Bunney, B. S., 560

- Water, absorption from rat biliary tree studied by retrograde intrabiliary injection, 150
- Watkins, D., *see* Pillsbury, S., 713
- Way, E. L.
see Ho, I. K., 336, 347
see Wei, E., 108
- Wei, E., Loh, H. H. and Way, E. L.: Brain sites of precipitated abstinence in morphine-dependent rats, 108
- Weiss, G. B.: Inhibition by lanthanum of some calcium-related actions in frog rectus abdominus muscle, 551
- Weissinger, J. L., *see* Fischer, L. J., 163
- Westfall, D. P.: Antagonism by protriptyline and desipramine of the response of the vas deferens of the rat to norepinephrine, acetylcholine and potassium, 540
- Wiggins, J. R., Danilo, P., Jr., Gelband, H. and Bassett, A. L.: Nicotine and potassium chloride contraction in mammalian ventricle, 457
- Willis, W. D., Jr., *see* Jordan, L. M., 572
- Winter, J. C.: A comparison of the stimulus properties of mescaline and 2,3,4-trimethoxyphenylethylamine, 101
- Wolpert, M. K., Althaus, J. R. and Johns, D. G.: Nitroreductase activity of mammalian liver aldehyde oxidase, 202
- Wong, S., Gardocki, J. F. and Pruss, T. P.: Pharmacologic evaluation of Tolectin (tolmetin, McN-2559) and McN-2891, two anti-inflammatory agents, 127
- Yanagita, T. and Takahashi, S.: Dependence liability of several sedative-hypnotic agents evaluated in monkeys, 307
- Yarbrough, G. G., Buxbaum, D. M. and Sanders-Bush, E.: Biogenic amines and narcotic effects. II. Serotonin turnover in the rat after acute and chronic morphine administration, 328
- Yarbrough, G. G., *see* Buxbaum, D. M., 317
- Zampaglione, N. G. and Mannering, G. J.: Properties of benzpyrene hydroxylase in the liver, intestinal mucosa and adrenal of untreated and 3-methylcholanthrene-treated rats, 676
- Zimmerman, B. G.: Blockade of adrenergic potentiating effect of angiotensin by 1-Sar-8-Ala-angiotensin II, 486