

## INDEX

Volume 172, March-April 1970

- Acetazolamide, influence on anion secretion into cerebrospinal fluid, 197
- Acetylcholine(s)  
effect on adrenal catecholamine secretion, 69  
halogeno-, cholinergic activities of, 351  
nicotine and, comparison of effects on cycle length and action potentials of guinea-pig atria, 255
- Acetylsalicylic acid, combination with other drugs, effects on inflammation induced by carrageenan, 423
- Acidosis, effects on chronotropic responses, norepinephrine storage and release in isolated guinea-pig atria, 289
- Adipose tissue, of cattle, sheep, goats and swine, concentrations of thiopental in, 128
- Adrenalectomy, influence on nicotine-induced inhibition of contractile activity in stomach and duodenum of dog, 377
- Adrenal glands  
effects of splanchnic nerve stimulation and cholinergic agents on secretion of catecholamines by, 69  
release of catecholamines in response to nicotine, 377
- Adrenergic amines, in rabbit aortic strips, interactions between potentiating agents of, 320
- Adrenergic blockade  
*alpha* and *beta*, and inotropic response to phenylephrine, 274  
*beta*, of chronotropic effects of nicotine and norepinephrine in guinea-pig atria, 255  
effect of phentolamine on responses of normal, denervated and decentralized cat nictitating membrane to methoxamine and norepinephrine, 91
- Adrenergic blocking drugs, *beta*, reduction of jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Adrenergic nerves, release of norepinephrine from isolated rat iris by field stimulation, 332
- Adrenergic neurons, blockade by guanethidine and related agents and antagonism by drugs, 100
- AHR-0602, inhibition of contractile activity in stomach and duodenum of dog, 377
- $\beta$ -Alanine, effects on mammalian autonomic ganglia, 384
- Alpha* adrenergic blockade, lack of effect on inotropic action of phenylephrine on rabbit atria, 274
- Amine(s)  
adrenergic, in rabbit aortic strips, interactions between potentiating agents of, 320  
retention in rat heart, effect of bretylium on, 282  
sympathomimetic, mephentermine and, evaluation of vasodilation produced by, 297
- Amino acids,  $\gamma$ -aminobutyric acid and, actions on mammalian autonomic ganglia, 384
- $\gamma$ -Aminobutyric acid, related amino acids and, actions on mammalian autonomic ganglia, 384
- $\gamma$ -Amino  $\beta$ -hydroxybutyric acid, effects on mammalian autonomic ganglia, 384
- 3-Amino-1-propanesulfonic acid, effects on mammalian autonomic ganglia, 384
- Amitriptyline, inhibition of metabolism of guanethidine and related agents by hepatic microsomes by, 108
- Amphetamine  
effect on heart force in dogs, 297  
retention in rat heart after bretylium, 282
- d*-Amphetamine, potentiation of jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Anesthesia  
produced by thiopental in cattle, sheep, goats and swine, 128  
spinal, influence on nicotine-induced inhibition of contractile activity in stomach and duodenum of dog, 377
- Anesthetics  
local, effects of pH gradients on action of procaine and lidocaine in intact and desheathed sciatic nerves, 1  
local, effects of pH gradients on uptake and distribution of  $C^{14}$ -procaine and lidocaine in intact and desheathed sciatic nerve trunks, 18
- Anoxia, effect on release of norepinephrine from spleen, 342
- Antihistamines, lack of influence on mephentermine-induced vasodilation in dogs, 297
- Antimalarial drugs, chloroquine diphosphate and RP-12278, neuromuscular blocking properties of, 44
- Aortic smooth muscle, comparison of retentions of methoxamine and norepinephrine in, 91
- Aortic strips  
rabbit, antagonism of phentolamine against exogenously administered and endogenously released norepinephrine in, 310  
rabbit, interactions between potentiating agents of adrenergic amines in, 320
- Artery, pulmonary, main, isolated, rabbit, release

- of H<sup>3</sup>-norepinephrine in relation to muscle contraction in, 62
- Askari, A. and Rao, S. N.: Drugs affecting sodium transport in human erythrocyte ghosts, 211
- Aspirin, combination with other drugs, effects on inflammation induced by carrageenan, 423
- Atria**
- guinea-pig and cat, rate and contractile force, effect of gallamine on, 266
  - guinea-pig, electrically driven, biphasic effect of nicotine on action potential repolarization in, 255
  - guinea-pig, isolated, effects of acidosis on chronotropic responses, norepinephrine storage and release in, 289
  - rabbit, blockade of inotropic action of phenylephrine by bretylium or cocaine in, 274
- Atropine**
- and responses of denervated cat nictitating membrane, 77
  - blockade of effects of acetylcholine and nicotine in guinea-pig atria, 255
  - failure to inhibit positive inotropic response to gallamine, 266
  - lack of influence on mephentermine-induced vasodilation in dogs, 297
- Autonomic ganglia, mammalian, actions of  $\gamma$ -aminobutyric acid and related amino acids on, 384
- Azzaro, A. J., *see* Peach, M. J., 289
- Barbiturate(s)**
- in rhesus monkeys, development of tolerance to and physical dependence on, 163
  - sodium 5-(1,3-dimethylbutyl)-5-ethyl, jumping activity induced by, role of sympathetic nervous system, 170
- Basal metabolism, effect of dioxoisquinoline-4-carboxanilides on, 138
- Bass, P., *see* Carlson, G. M., 367, 377
- Behavior, punished and unpunished, in pigeon, effects of some benzodiazepines on, 397
- Bendroflumethiazide, effect on sodium transport and metabolism in toad bladder, 203
- Benzodiazepines**
- effects on punished and unpunished behavior in pigeon, 397
  - lack of effect in inhibiting jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Beta adrenergic blockade**
- blockade of inotropic action of phenylephrine on rabbit atria, 274
  - of chronotropic effects of nicotine and norepinephrine in guinea-pig atria, 255
- Beta adrenergic blocking drugs**, reduction of jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- H<sup>3</sup>-Bethanidine, uptake by heart slices, competitive inhibition by norepinephrine, guanethidine, debrisoquin, bretylium, tyramine, metaraminol and desipramine, 100
- Bevan, J. A., *see* Su, C., 62
- Bianchi, C. P.
- see* Strobel, G. E., 1, 18
  - see* Suarez-Kurtz, G., 33
- Bigger, J. T., Jr. and Mandel, W. J.: Effect of lidocaine on conduction in canine Purkinje fibers and at the ventricular muscle-Purkinje fiber junction, 239
- Bis[(chloro-7''-quinolyl-4'')amino-2'-propyl]-1,4-piperazine (RP-12278), antimalarial agent, neuromuscular blocking properties of, 44
- Bladder, toad, effect of bendroflumethiazide on sodium transport and metabolism in, 203
- Blockade**
- adrenergic, effect of phentolamine on responses of normal, denervated and decentralized cat nictitating membrane to methoxamine and norepinephrine, 91
  - selective, of adrenergic neurons by guanethidine and related agents, antagonism by drugs, 100
- Blood flow, effects of mephentermine and certain other sympathomimetic amines on femoral, renal and superior mesenteric arteries in dogs, 297
- Boerth, R. C., Ryan, M. J. and Brody, M. J.: Pharmacologic blockade of reflex vasodilation: Effects on postulated neurohumoral mechanisms, 52
- Brain**
- catecholamines synthesized from circulating H<sup>3</sup>-tyrosine, daily rhythm in accumulation of, 416
  - dopamine levels in relation to pharmacologic actions of L-dopa, 406
  - levels, of sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
  - of cattle, sheep, goats and swine, concentrations of thiopental in, 128
- Bretylium**
- blockade of release of H<sup>3</sup>-norepinephrine from arterial strips, 62
  - cocaine or, blockade of cardiac action of phenylephrine by, 274
  - competitive inhibition of uptake of H<sup>3</sup>-bethanidine by heart slices, 100
  - decreased potentiation of norepinephrine responses by cocaine after, 320
  - effect on amine retention in rat heart, 282
  - influence on responses of cat nictitating membrane, 77
- Broder, L. E., *see* Maren, T. H., 197
- Brodie, B. B., *see* Koppanyi, T., 170
- Brody, M. J., *see* Boerth, R. C., 52

- Bromoacetylcholine, muscarinic and nicotinic activities of, 351
- Brown, B. R., Jr. and Crout, J. R.: The sympathomimetic effect of gallamine on the heart, 266
- BW 654-induced vasodilation in dogs, 297
- Calcium  
influence on contracture produced by RP-12278, 44  
inhibition of release of norepinephrine from isolated rat iris by field stimulation in absence of, 332
- Caldwell, R. W. and Goldberg, L. I.: An evaluation of the vasodilation produced by mephentermine and certain other sympathomimetic amines, 297
- Carbon dioxide, entry from blood into cerebrospinal fluid before and after inhibition of carbonic anhydrase, 197
- Carbonic anhydrase, role in anion secretion into cerebrospinal fluid, 197
- Cardiac glycosides  
effect on interaction of  $\text{Ca}^{++}$  with mitochondria, 180  
six, effects on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188
- Carlson, G. M., Ruddon, R. W., Hug, C. C., Jr. and Bass, P.: Effects of nicotine on gastric antral and duodenal contractile activity in the dog, 367
- Carlson, G. M., Ruddon, R. W., Hug, C. C., Jr., Schmiede, S. K. and Bass, P.: Analysis of the site of nicotine action on gastric antral and duodenal contractile activity, 377
- Carrageenan-induced foot edema of rat, interactions of anti-inflammatory drugs in, 423
- Castles, T. R., Loth, E., Crawford, C. R. and Lee, C. C.: The neuromuscular blocking properties of the antimalarial agent, bis[(chloro-7''-quinolyl-4'')amino-2'-propyl]-1,4-piperazine, 44
- Catecholamine(s)  
adrenal, comparison of differential secretion by splanchnic nerve stimulation and cholinergic agents, 69  
brain, synthesized from circulating  $\text{H}^3$ -tyrosine, daily rhythm in accumulation of, 416  
-depleting effect of guanethidine, antagonism by desipramine, 100  
depletion, influence on inotropic action of phenylephrine in rabbit atria, 274  
effects in rabbit aortic strips, antagonism by phentolamine, 310  
effects of denervation and  $\beta$ -TM 10 on, in cat nictitating membrane, 77  
-induced inhibition of contractile activity in stomach and duodenum of dog, 367  
potentiation of effects on rabbit aortic strips after inhibition of catechol-O-methyltransferase with 4-tropolone acetamide, 320  
release from spleen, effects of metabolic inhibitors on, 342  
release resulting from administration of nicotine in dog, 377  
retention in rat heart after bretylium, 282
- Catechol-O-methyltransferase, inhibition by 4-tropolone acetamide in rabbit aortic strips, 320
- Cavanaugh, J. H., *see* Mitchell, J. R., 108
- Cells, epithelial, effect of bendroflumethiazide on sodium transport and metabolism in toad bladder, 203
- Central nervous system, potentiation and inhibition of some central actions of L-dopa by decarboxylase inhibitors, 406
- Cerebrospinal fluid  
in cattle, sheep, goats and swine, concentrations of thiopental in, 128  
role of carbonic anhydrase in anion secretion into, 197
- Chang, Y.-H., *see* Wiseman, E. H., 138
- Chiaini, J., *see* Wiseman, E. H., 138
- Chiou, C. Y. and Sastry, B. V. R.: Cholinergic activities of halogeno-acetylcholines, 351
- Chlordiazepoxide, effect on punished and unpunished behavior in pigeon, 397
- Chloride, entry from blood into cerebrospinal fluid before and after inhibition of carbonic anhydrase, 197
- Chlorisondamine, blockade of hyperglycemia in mice induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Chloroacetylcholine, muscarinic and nicotinic activities of, 351
- p-Chloromercuribenzoate, effect on release of norepinephrine from spleen, 342
- Chloroquine diphosphate, RP-12278 and, antimalarial agents, neuromuscular blocking properties of, 44
- Chlorpromazine  
effect on sodium transport in red cell ghosts, 211  
inhibition of metabolism of guanethidine and related agents by hepatic microsomes by, 108
- Cholinergic agents, splanchnic nerve stimulation and, comparison of differential secretion of adrenal catecholamines by, 69
- Cocaine  
bretylium or, blockade of cardiac action of phenylephrine by, 274  
effect on retention of metamadol in rat heart, 282  
failure to inhibit positive inotropic response to gallamine, 266

- failure to sensitize cat nictitating membrane to methoxamine, 91
- ineffectiveness in blocking a pH-induced increase in atrial norepinephrine turnover, 289
- phenoxybenzamine, tripeleppamine and, effect on release of histamine- $C^{14}$  and norepinephrine- $H^3$ , 52
- potentiation of sympathomimetics in rabbit aortic strips, 320
- Convallatoxin, effect on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188
- Crawford, C. R., *see* Castles, T. R., 44
- Crout, J. R., *see* Brown, B. R., Jr., 266
- Curare, lack of effect on contracture produced by RP-12278, 44
- Cyanide, effect on release of norepinephrine from spleen, 342
- Cyanine 863, inhibition of renal tubular transport of morphine in chicken by, 224
- D'Amour and Smith method, measurement of analgesic efficacy and potency of pentazocine and nalorphine by, 154
- Debrisoquin
- competitive inhibition of uptake of  $H^3$ -bethanidine by heart slices, 100
  - guanethidine, guanoxan and, metabolism by hepatic microsomes and inhibition by drugs, 108
- Decarboxylase inhibitors, potentiation and inhibition of some central actions of L-dopa by, 406
- Decentralization, as a cause of supersensitivity to both methoxamine and norepinephrine in cat nictitating membrane, 91
- de Groat, W. C.: The actions of  $\gamma$ -aminobutyric acid and related amino acids on mammalian autonomic ganglia, 384
- Denervation
- failure to sensitize cat nictitating membrane to methoxamine, 91
  - of nictitating membrane of cat, effect of  $\beta$ -TM 10 on pharmacological, biochemical and morphological changes induced by, 77
- Desipramine
- competitive inhibition of uptake of  $H^3$ -bethanidine by heart slices, 100
  - decreased potentiation of norepinephrine responses by cocaine after, 320
  - effect on sodium transport in red cell ghosts, 211
  - inhibition of metabolism of guanethidine and related agents by hepatic microsomes by, 108
- Desmethylinipramine, effect on retention of metaraminol in rat heart, 282
- Diazepam, effect on punished and unpunished behavior in pigeon, 397
- Dichloroisoproterenol, blockade of inotropic action of phenylephrine on rabbit atria, 274
- Digitoxin, effect on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188
- Digoxin, effect on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188
- Dihydroergotamine
- blockade of nicotine-induced increases in duration of action potentials in guinea-pig atria, 255
  - lack of effect on nicotine- and catecholamine-induced inhibition of contractile activity in stomach and duodenum of dog, 367
- Dihydro-ouabain, effect on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188
- Dihydrostrophanthidinic acid, effect on interaction of  $Ca^{++}$  with mitochondria, 180
- Dimethylphenylpiperazinium
- effect on adrenal catecholamine secretion, 69
  - inhibition of contractile activity in stomach and duodenum of dog, 367
- Dingell, J. V., *see* Mitchell, J. R., 108
- Dinitrophenol, effect on release of norepinephrine in spleen during glucose deprivation, 342
- Dioxoisoquinoline-4-carboxanilides, novel non-steroidal anti-inflammatory agents with a species-specific effect on basal metabolism, 138
- Dipyridamole, effect on sodium transport in red cell ghosts, 211
- L-Dopa, some central actions of, potentiation and inhibition by decarboxylase inhibitors, 406
- Draskóczy, P. R., *see* Pluchino, S., 77
- Duodenum
- of dog, stomach and, influence of nicotine on contractile activity in, 377
  - of dog, stomach and, inhibition of contractile activity by nicotine and catecholamines in, 367
- Dutta, S., *see* Ito, M., 188
- Edema, foot, of rat, carrageenan-induced, interactions of anti-inflammatory drugs in, 423
- Emesis, induced by L-dopa, attenuation by decarboxylase inhibitors, 406
- Epinephrine
- inhibition of contractile activity in stomach and duodenum of dog, 367
  - interactions with potentiating agents in rabbit aortic strips, 320
  - norepinephrine and, comparison of differential secretion produced by splanchnic nerve stimulation and cholinergic agents, 69
- Epithelial cells, effect of bendroflumethiazide on

- sodium transport and metabolism in toad bladder, 203
- Erythrocyte ghosts, human, drugs affecting sodium transport in, 211
- Ethacrynic acid, effect on sodium transport in red cell ghosts, 211
- Ethereal sulfate, morphine, morphine and, in chicken, mechanism of renal tubular transport of, 224
- N-Ethylmaleimide, effect on release of norepinephrine from spleen, 342
- Excitation-contraction coupling, of sartorius and rectus abdominis muscle in frogs, effect of SKF 525-A on, 33
- Eye, rat, release of norepinephrine from isolated iris by field stimulation, 332
- Farnebo, L.-O. and Hamberger, B.: Release of norepinephrine from isolated rat iris by field stimulation, 332
- Fleming, W. W.  
see Peach, M. J., 289  
see Urquilla, P. R., 310
- Fluoroacetylcholine, muscarinic and nicotinic activities of, 351
- Ford, G. D., see Peach, M. J., 289
- Foulkes, D. M.: The metabolism of C<sup>14</sup>-ICI 54,450 (Myalex) in various species—An *in vivo* NIH shift, 115
- Fujimoto, J. M., see Watrous, W. M., 224
- Furchgott, R. F., see Levin, J. A., 320
- Furosemide, effect on sodium transport in red cell ghosts, 211
- Gallamine, sympathomimetic effect on heart, 266
- Ganglia, autonomic, mammalian, actions of  $\gamma$ -aminobutyric acid and related amino acids on, 384
- Ganglionic blockade, effect of hexamethonium on biphasic effects of nicotine on action potentials in guinea-pig atria, 255
- Ganglionic blocking drugs, reduction of jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Gebber, G. L., see Klevans, L. R., 69
- Glands  
adrenal, effects of splanchnic nerve stimulation and cholinergic agents on secretion of catecholamines by, 69  
adrenal, release of catecholamines in response to nicotine, 377
- Glucose  
deprivation, lack of effect on release of norepinephrine from spleen, 342  
plasma, elevation in mice exhibiting jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Glyceryl trinitrate, reduction in small vessel resistance compared with effects of mephentermine and isoproterenol, 297
- Glycine, lack of effect on mammalian autonomic ganglia, 384
- Glycogen, effect of bendroflumethiazide on transport in toad bladder, 203
- Glycosides  
cardiac, effect on interaction of Ca<sup>++</sup> with mitochondria, 180  
cardiac, six, effects on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188
- Goldberg, L. I., see Caldwell, R. W., 297
- Good, A. L., see Sharma, R. P., 128
- Gracilis muscles, dog, isolated, perfused, effects of phenoxybenzamine, cocaine and tripelenamine on release of histamine-C<sup>14</sup> and norepinephrine-H<sup>3</sup>, 52
- Gralla, E. J., see Wiseman, E. H., 138
- Grant, T. J., see Swingle, K. F., 423
- Gray, W. D., Osterberg, A. C. and Scuto, T. J.: Measurement of the analgesic efficacy and potency of pentazocine by the D'Amour and Smith method, 154
- Guanethidine  
decreased potentiation of norepinephrine responses produced by cocaine or 4-tropolone acetamide after, 320  
related agents and, blockade of adrenergic neurons and antagonism by drugs, 100  
related agents and, metabolism by hepatic microsomes and inhibition by drugs, 108
- Guanoxan, guanethidine, debrisoquin and, metabolism by hepatic microsomes and inhibition by drugs, 108
- Gut, of cattle, sheep, goats and swine, concentrations of thiopental in, 128
- H44/68, effect on release of norepinephrine from isolated rat iris by field stimulation, 332
- Hamberger, B., see Farnebo, L.-O., 332
- Heart  
action of phenylephrine, blockade by bretylium or cocaine, 274  
biphasic effect of nicotine on action potential repolarization in guinea-pig atria, 255  
effects of lidocaine and quinidine on conduction in Purkinje fibers, 239  
effects of mephentermine, amphetamine, pseudoephedrine and phenpromethamine on contractile force in dogs, 297  
glycosides, effect on interaction of Ca<sup>++</sup> with mitochondria, 180  
glycosides, six, effects on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188

- guinea-pig, effects of acidosis on chronotropic responses, norepinephrine storage and release in, 289
- rat, effect of bretylium on amine retention in, 282
- slices, uptake of  $H^+$ -bethanidine by, competitive inhibition by norepinephrine, guanethidine, debrisoquin, bretylium, tyramine, metaraminol and desipramine, 100
- sympathomimetic effect of gallamine on, 266
- Hepatic microsomes, metabolism of guanethidine, debrisoquin and guanoxan by, inhibition by drugs, 108
- Hexamethonium
- blockade of biphasic effect of nicotine on action potentials in guinea-pig atria, 255
  - failure to inhibit positive inotropic response to gallamine, 266
- Histamine- $C^{14}$ , release during baroreceptor-induced reflex vasodilatation, effects of phenoxylbenzamine, cocaine and tripeleminamine on, 52
- Hollander, P. B., *see* Ito, M., 188
- Hong, S. A., *see* Lee, K. S., 180
- Hug, C. C., Jr., *see* Carlson, G. M., 367, 377
- Hydrocortisone
- combination with other drugs, effects on inflammation induced by carrageenan, 423
  - decreased potentiation of norepinephrine responses produced by 4-tropolone acetamide after, 320
- Hyperglycemia, in mice, induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, blockade by chlorisondamine, pempidine, propranolol and phentolamine, 170
- Hypothermia
- effect on release of norepinephrine from spleen, 342
  - induced by reserpine, reversal by L-dopa and enhancement of response by decarboxylase inhibitors, 406
- $C^{14}$ -ICI 54,450 (Myalex) metabolism in various species, an *in vivo* NIH shift, 115
- Imipramine
- effect on punished and unpunished behavior in pigeon, 397
  - effect on sodium transport in red cell ghosts, 211
- Inflammation, carrageenan-induced, interactions of anti-inflammatory drugs, 423
- Iodoacetate, effect on sodium transport in red cell ghosts, 211
- Iodoacetic acid, effect on release of norepinephrine from spleen, 342
- Iodoacetylcholine, muscarinic and nicotinic activities of, 351
- Indomethacin, combination with other drugs, effects on inflammation induced by carrageenan, 423
- Ions, tetraethylammonium, actions on potassium fluxes in frog sartorius muscle, 230
- Iproniazid, effect on potentiation of responses to adrenergic amines produced by cocaine or 4-tropolone acetamide in rabbit aortic strips, 320
- Iris, rat, release by field stimulation of norepinephrine from, 332
- Isoproterenol
- and responses of denervated cat nictitating membrane, 77
  - lack of retention in rabbit aortic strips, 91
  - reduction in small vessel resistance compared with effects of mephentermine and glyceryl trinitrate, 297
- Isoostrophanthidin, effect on interaction of  $Ca^{++}$  with mitochondria, 180
- Ito, M., Hollander, P. B., Marks, B. H. and Dutta, S.: The effects of six cardiac glycosides on the transmembrane potential and contractile characteristics of the right ventricle of guinea pigs, 188
- Jaques, L. W., *see* Swingle, K. F., 423
- Kang, D. H., *see* Lee, K. S., 180
- Kelleher, R. T., *see* Wuttke, W., 397
- Kidney
- of cattle, sheep, goats and swine, concentrations of thiopental in, 128
  - tubular transport of morphine and morphine ethereal sulfate in chicken, mechanism of, 224
- Kirpekar, S. M., Prat, J. C. and Yamamoto, H.: Effects of metabolic inhibitors on norepinephrine release from the perfused spleen of the cat, 342
- Klevans, L. R. and Gebber, G. L.: Comparison of differential secretion of adrenal catecholamines by splanchnic nerve stimulation and cholinergic agents, 69
- Kopin, I. J., *see* Krauss, K. R., 282
- Koppanyi, T., Maling, H. M., Saul, W. and Brodie, B. B.: Jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate. I. The role of the sympathetic nervous system, 170
- Krauss, K. R., Kopin, I. J. and Weise, V. K.: The effect of bretylium on amine retention in rat heart, 282
- Kvam, D. C., *see* Swingle, K. F., 423
- Lactate, accumulation in toad bladder, effect of bendroflumethiazide on, 203
- Langer, S. Z., *see* Pluchino, S., 77
- Lee, C. C., *see* Castles, T. R., 44

- Lee, K. S., Hong, S. A. and Kang, D. H.: Effect of cardiac glycosides on interaction of  $\text{Ca}^{++}$  with mitochondria, 180
- Lee, W. C., *see* Yoo, C. S., 274
- Levin, J. A. and Furchgott, R. F.: Interactions between potentiating agents of adrenergic amines in rabbit aortic strips, 320
- Lidocaine  
effect on conduction in canine Purkinje fibers and at ventricular muscle-Purkinje fiber junction, 239  
effect on sodium transport in red cell ghosts, 211  
 $\text{C}^{14}$ -procaine and, in intact and desheathed sciatic nerve trunks, effects of pH gradients on uptake and distribution of, 18  
procaine and, in intact and desheathed sciatic nerves, effects of pH gradients on action of, 1
- Lilly 390-induced vasodilation in dogs, 297
- Liver  
microsomes, metabolism of guanethidine, debrisoquin and guanoxan by, inhibition by drugs, 108  
microsomes, metabolism of thiopental by, in cattle, sheep, goats and swine, 128
- Loth, E., *see* Castles, T. R., 44
- Lotti, V. J. and Porter, C. C.: Potentiation and inhibition of some central actions of L(-)-dopa by decarboxylase inhibitors, 406
- Magnesium  
influence on contracture produced by RP-12278, 44  
metabolism in rats, influence of morphine on, 122
- Maling, H. M., *see* Koppanyi, T., 170
- Mandel, W. J., *see* Bigger, J. T., Jr., 239
- Marchand, C., *see* Vachon, M., 122
- Maren, T. H. and Broder, L. E.: The role of carbonic anhydrase in anion secretion into cerebrospinal fluid, 197
- Marinobufagin, effect on interaction of  $\text{Ca}^{++}$  with mitochondria, 180
- Marks, B. H., *see* Ito, M., 188
- Maxwell, R. A., *see* Trendelenburg, U., 91
- May, D. G., *see* Watrous, W. M., 224
- McDougal, B. and Sullivan, L. P.: Studies of the effect of bendroflumethiazide on sodium transport and metabolism in the toad bladder, 203
- McN A-343, inhibition of contractile activity in stomach and duodenum of dog, 367
- Membrane(s)  
effects of lidocaine and quinidine on conduction in canine Purkinje fibers and at ventricular muscle-Purkinje fiber junction, 239  
nictitating, cat's, effect of  $\beta$ -TM 10 on pharmacological, biochemical and morphological changes induced by denervation of, 77  
nictitating, cat's, methoxamine as a tool to assess importance of intraneuronal uptake of L-norepinephrine in, 91  
resting potential, frog sartorius muscle, effect of tetraethylammonium ions on, 230
- Mephentermine, certain other sympathomimetic amines and, evaluation of vasodilation produced by, 297
- Mepiperphenidol, inhibition of renal tubular transport of morphine in chicken by, 224
- Metabolism  
basal, effect of dioxoisoquinoline-4-carboxanilides on, 138  
distribution and, of thiopental in cattle, sheep, goats and swine, 128  
of  $\text{C}^{14}$ -ICI 54,450 (Myalex) in various species, an *in vivo* NIH shift, 115  
of guanethidine, debrisoquin and guanoxan by hepatic microsomes and inhibition by drugs, 108  
of magnesium in rats, influence of morphine on, 122  
sodium transport and, in toad bladder, effect of bendroflumethiazide on, 203
- Metaraminol  
competitive inhibition of uptake of  $\text{H}^+$ -bethanidine by heart slices, 100  
inhibition of metabolism of guanethidine and related agents by hepatic microsomes by, 108  
potentiation of effects by cocaine or 4-tropolone acetamide in rabbit aortic strips, 320  
retention in rat heart after bretylium, 282
- Methacholine, effect of nicotine on contractile activity in stomach and duodenum of dog, 377
- Methamphetamine-induced vasodilation in dogs, 297
- Methoxamine, for assessing importance of intraneuronal uptake of L-norepinephrine in cat's nictitating membrane, 91
- N-Methylnicotinamide, influence on renal tubular transport of morphine in chicken, 224
- $\alpha$ -Methylnorepinephrine  
potentiation of effects on rabbit aortic strips after inhibition of catechol-O-methyltransferase with 4-tropolone acetamide, 320  
retention in rat heart after bretylium, 282
- $\alpha$ -Methyloctopamine, retention in rat heart after bretylium, 282
- Methylphenidate-induced vasodilation in dogs, 297
- Microsomes  
hepatic, metabolism of guanethidine, debrisoquin and guanoxan by, inhibition by drugs, 108  
liver, metabolism of thiopental by, in cattle, sheep, goats and swine, 128
- Migliardi, J. R., *see* Wiseman, E. H., 138

- Mitchell, J. R. and Oates, J. A.: Guanethidine and related agents. I. Mechanism of the selective blockade of adrenergic neurons and its antagonism by drugs, 100
- Mitchell, J. R., Cavanaugh, J. H., Dingell, J. V. and Oates, J. A.: Guanethidine and related agents. II. Metabolism by hepatic microsomes and its inhibition by drugs, 108
- Mitochondria, interaction of  $\text{Ca}^{++}$  with, effect of cardiac glycosides on, 180
- MJ-1999, lack of effect on mephentermine-induced relaxation of rabbit portal vein, 297
- Morphine  
influence on magnesium metabolism in rats, 122  
morphine ethereal sulfate and, in chicken, mechanism of renal tubular transport of, 224
- Muscle(s)  
biphasic effect of nicotine on action potential repolarization in guinea-pig atria, 255  
blocking action of chloroquine diphosphate and RP-12278, 44  
cardiac, rat, retention of amines after bretylium, 282  
contraction in isolated rabbit main pulmonary artery, release of  $\text{H}^+$ -norepinephrine in relation to, 62  
effects of acidosis on chronotropic responses, norepinephrine storage and release in isolated guinea-pig atria, 289  
gracilis, dog, isolated, perfused, effects of phenoxylbenzamine, cocaine and tripeleannamine on release of histamine- $\text{C}^{14}$  and norepinephrine- $\text{H}^+$ , 52  
heart, glycosides, six, effects on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188  
influence of nicotine on gastrointestinal activity in dog, 377  
inhibition of contractile activity in stomach and duodenum of dog by nicotine and catecholamines, 367  
interactions between potentiating agents and adrenergic amines in rabbit aortic strips, 320  
muscarinic and nicotinic activities of halogenoacetylcholines, 351  
of cattle, sheep, goats and swine, concentrations of thiopental in, 128  
-Purkinje fiber junction, ventricular, effect of lidocaine on conduction in, 239  
release of norepinephrine from isolated rat iris by field stimulation, 332  
sartorius and rectus abdominis, effect of SKF 525-A on excitation-contraction coupling in frogs, 33  
sartorius, frog, actions of tetraethylammonium ions on potassium fluxes in, 230  
smooth, aortic, antagonism of phentolamine against exogenously administered and endogenously released norepinephrine in, 310  
smooth, aortic, comparison of retentions of methoxamine and norepinephrine in, 91  
sympathomimetic effect of gallamine on heart, 266  
vasodilation induced by mephentermine in dogs, 297
- Myalex ( $\text{C}^{14}$ -ICI 54,450), metabolism in various species, an *in vivo* NIH shift, 115
- Nalorphine hydrochloride  
effect on increase in serum magnesium caused by morphine, 122  
measurement by D'Amour and Smith method of analgesic efficacy and potency of, 154
- Nerve(s)  
adrenergic, release of norepinephrine from isolated rat iris by field stimulation, 332  
antagonism by phentolamine of effects of norepinephrine released from adrenergic terminals in aortic strips, 310  
neuromuscular blockade produced by chloroquine diphosphate, 44  
sciatic, frog, sheathed and desheathed, effect of SKF 525-A on conduction, 33  
sciatic, intact and desheathed, effects of pH gradients on action of procaine and lidocaine in, 1  
splanchnic, stimulation, cholinergic agents and, comparison of differential secretion of adrenal catecholamines by, 69  
stimulation, effects of metabolic inhibitors on norepinephrine release from spleen, 342  
sympathetic, stimulation, effects of phenoxylbenzamine, cocaine and tripeleannamine on release of norepinephrine- $\text{H}^+$  during, 52  
trunks, sciatic, intact and desheathed, effects of pH gradients on uptake and distribution of  $\text{C}^{14}$ -procaine and lidocaine in, 18
- Nervous system  
central, potentiation and inhibition of some central actions of L-dopa by decarboxylase inhibitors, 406  
sympathetic, role of, jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Neuromuscular blockade  
produced by several halogenoacetylcholines, 351  
properties of antimalarial agents, chloroquine diphosphate and RP-12278, 44
- Neurons, adrenergic, blockade by guanethidine and related agents and antagonism by drugs, 100
- Nialamide, inhibitory effects on release of norepinephrine from isolated rat iris by field stimulation, 332
- Nicotine  
action on gastric antral and duodenal contractile activity, analysis of site of, 377



- biphasic effect on action potential repolarization in electrically driven guinea-pig atria, 255
- effect on adrenal catecholamine secretion, 69
- effect on gastric antral and duodenal contractile activity in dog, 367
- Nictitating membrane
- cat's, effect of  $\beta$ -TM 10 on pharmacological, biochemical and morphological changes induced by denervation of, 77
- cat's, methoxamine as a tool to assess importance of intraneuronal uptake of *l*-norepinephrine in, 91
- NIH shift, *in vivo*, metabolism of  $C^{14}$ -ICI 54,450 (Myalex) in various species, 115
- Nitrazepam, effect on punished and unpunished behavior in pigeon, 397
- Norepinephrine
- and responses of denervated cat nictitating membrane, 77
- competitive inhibition of uptake of  $H^3$ -bethanidine by heart slices, 100
- diurnal variations in accumulation in brain, 416
- effect on action potential of guinea-pig atria, 255
- epinephrine and, comparison of differential secretion produced by splanchnic nerve stimulation and cholinergic agents, 69
- exogenously administered and endogenously released, in rabbit aortic strips, antagonism of phentolamine against, 310
- inhibition of contractile activity in stomach and duodenum of dog, 367
- interactions with potentiating agents in rabbit aortic strips, 320
- retention in rat heart after bretylium, 282
- reversal of tachyphylaxis by, 266
- storage, chronotropic responses, release and, in isolated guinea-pig atria, effects of acidosis on, 289
- Norepinephrine- $H^3$
- release during sympathetic nerve stimulation, effects of phenoxybenzamine, cocaine and tripeleennamine on, 52
- release in arterial strips studied by technique of superfusion and transmural stimulation, 62
- release from perfused spleen of cat, effects of metabolic inhibitors on, 342
- l*-Norepinephrine, in cat's nictitating membrane, methoxamine as a tool to assess importance of intraneuronal uptake of, 91
- Oates, J. A., *see* Mitchell, J. R., 100, 108
- Octopamine, retention in rat heart after bretylium, 282
- Oligomycin, effect on sodium transport in red cell ghosts, 211
- Osterberg, A. C., *see* Gray, W. D., 154
- Ouabain
- decreased potentiation of norepinephrine responses by cocaine after, 320
- effect on interaction of  $Ca^{++}$  with mitochondria, 180
- effect on release of norepinephrine from spleen, 342
- effect on sodium transport and metabolism in toad bladder, 203
- effect on sodium transport in red cell ghosts, 211
- effect on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188
- Oxygen, consumption in toad bladder, effect of bendroflumethiazide on, 203
- Pappano, A. J.: Biphasic effect of nicotine on action potential repolarization in electrically driven guinea-pig atria, 255
- Peach, M. J., Ford, G. D., Azzaro, A. J. and Fleming, W. W.: The effects of acidosis on chronotropic responses, norepinephrine storage and release in isolated guinea-pig atria, 289
- Pempidine, blockade of hyperglycemia in mice induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Pentazocine, measurement by D'Amour and Smith method of analgesic efficacy and potency of, 154
- pH
- gradients, effects on action of procaine and lidocaine in intact and desheathed sciatic nerves, 1
- gradients, effects on uptake and distribution of  $C^{14}$ -procaine and lidocaine in intact and desheathed sciatic nerve trunks, 18
- induced increase in atrial norepinephrine turnover, ineffective blocking action by cocaine, 289
- Phenothiazines, inhibition of metabolism of guanethidine and related agents by hepatic microsomes by, 108
- Phenoxybenzamine
- cocaine, tripeleennamine and, effect on release of histamine- $C^{14}$  and norepinephrine- $H^3$ , 52
- effect on transmural stimulation-induced  $H^3$ -norepinephrine release from arterial strips, 62
- lack of effect on nicotine- and catecholamine-induced inhibition of contractile activity in stomach and duodenum of dog, 367
- Phenpromethamine, effect on heart force in dogs, 297
- Phentolamine
- antagonism against exogenously administered and endogenously released norepinephrine in rabbit aortic strips, 310
- blockade of hyperglycemia in mice induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- competitive blockade of effect of methoxamine

- and norepinephrine on cat's nictitating membrane, 91
- Phenylbutazone**  
 combination with other drugs, effects on inflammation induced by carrageenan, 423  
 comparison of anti-inflammatory actions with those of dioxisoquinoline-4-carboxanilides, 138
- Phenylephrine**  
 and responses of denervated cat nictitating membrane, 77  
 cardiac action of, blockade by bretylium or cocaine, 274  
 lack of effect of catechol-O-methyltransferase inhibition by 4-tropolone acetamide on responses in rabbit aortic strips, 320
- Picrotoxin**, antagonism of effects of  $\gamma$ -aminobutyric acid on mammalian autonomic ganglia, 384
- Plasma**  
 glucose, elevation in mice exhibiting jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170  
 proteins, binding of thiopental in cattle, sheep, goats and swine, 128
- Pluchino, S., Van Orden, L. S., III, Draskóczy, P. R., Langer, S. Z. and Trendelenburg, U.:** The effect of  $\beta$ -TM 10 on the pharmacological, biochemical and morphological changes induced by denervation of the nictitating membrane of the cat, 77
- Pluchino, S.,** *see* Trendelenburg, U., 91
- Porter, C. C.,** *see* Lotti, V. J., 406
- Potassium**  
 diffusion in desheathed frog and toad sciatic nerves, 1  
 fluxes, in frog sartorius muscle, actions of tetraethylammonium ions on, 230  
 -induced contracture, blockade by SKF 525-A in frog rectus abdominis muscle, 33  
 -induced release of norepinephrine from spleen, influence of metabolic inhibitors, 342  
 influence on contracture produced by RP-12278, 44
- Prat, J. C.,** *see* Kirpekar, S. M., 342
- Probenecid**, lack of effect on renal tubular transport of morphine and excretion of morphine ethereal sulfate in chicken, 224
- Procaine**  
 effect on sodium transport in red cell ghosts, 211  
 lidocaine and, in intact and desheathed sciatic nerves, effects of pH gradients on action of, 1  
 $C^{14}$ -Procaine, lidocaine and, in intact and desheathed sciatic nerve trunks, effects of pH gradients on uptake and distribution of, 18
- Pronethalol**, decreased potentiation of norepinephrine responses by cocaine after, 320
- Propranolol**  
 blockade of hyperglycemia in mice induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170  
 blockade of inotropic action of phenylephrine on rabbit atria, 274  
 influence on effects of nicotine and norepinephrine on action potentials of guinea-pig atria, 255  
 inhibition of positive inotropic effect of gallamine by, 266  
 lack of influence on mephentermine-induced vasodilation in dogs, 297
- Proscillaridin**, effect on transmembrane potential and contractile characteristics of right ventricle of guinea pigs, 188
- Proteins**, plasma, binding of thiopental in cattle, sheep, goats and swine, 128
- Protriptyline**, inhibition of metabolism of guanethidine and related agents by hepatic microsomes by, 108
- Pseudoephedrine**, effect on heart force in dogs, 297
- Pulmonary artery**, main, isolated, rabbit, release of  $H^3$ -norepinephrine in relation to muscle contraction in, 62
- Purkinje fibers**, canine, ventricular muscle-Purkinje fiber junction and, effect of lidocaine on conduction in, 239
- Quinidine**, effect on conduction at ventricular muscle-Purkinje fiber junction, 239
- Rao, S. N.,** *see* Askari, A., 211
- Rectus abdominis muscle**, sartorius and, effect of SKF 525-A on excitation-contraction coupling in frogs, 33
- Reflex vasodilatation**, baroreceptor-induced, effects of phenoxybenzamine, cocaine and tripeleminamine on release of histamine- $C^{14}$  during, 52
- Renal blood flow**, effects of mephentermine and certain other sympathomimetic amines on, 297
- Reserpine**  
 abolition of nicotine-induced inhibition of contractile activity in stomach and duodenum of dog by, 367  
 depletion of catecholamines from rabbit atria, influence on inotropic action of phenylephrine, 274  
 effect of potentiation of responses to adrenergic amines produced by cocaine or 4-tropolone acetamide in rabbit aortic strips, 320  
 -induced hypothermia, reversal by L-dopa and enhancement of response by decarboxylase inhibitors, 406  
 induction of vasoconstriction by certain adrenergic stimulants after, 297  
 inhibition of positive inotropic effect of gallamine by, 266

- inhibitory effects on release of norepinephrine from isolated rat iris by field stimulation, 332
- RP-12278, bis[(chloro-7"-quinolyl-4")amino-2'-propyl]-1,4-piperazine, antimalarial agent, neuromuscular blocking properties of, 44
- Ruddon, R. W., *see* Carlson, G. M., 367, 377
- Ryan, M. J., *see* Boerth, R. C., 52
- Salicylate, combination with other drugs, effects on inflammation induced by carrageenan, 423
- Sartorius muscle
- frog, actions of tetraethylammonium ions on potassium fluxes in, 230
  - rectus abdominis and, effect of SKF 525-A on excitation-contraction coupling in frogs, 33
- Sastry, B. V. R., *see* Chiou, C. Y., 351
- Saul, W., *see* Koppanyi, T., 170
- Schmiede, S. K., *see* Carlson, G. M., 377
- Sciatic nerve(s)
- frog, sheathed and desheathed, effect of SKF 525-A on conduction, 33
  - intact and desheathed, effects of pH gradients on action of procaine and lidocaine in, 1
  - trunks, intact and desheathed, effects of pH gradients on uptake and distribution of C<sup>14</sup>-procaine and lidocaine in, 18
- Scilliroside, effect on interaction of Ca<sup>++</sup> with mitochondria, 180
- Scuto, T. J., *see* Gray, W. D., 154
- Sharma, R. P., Stowe, C. M. and Good, A. L.: Studies on the distribution and metabolism of thiopental in cattle, sheep, goats and swine, 128
- Sinoatrial node, biphasic effect of nicotine on action potential repolarization in guinea pig, 255
- SKF 525-A, sites of action in nerve and muscle, 33
- Smooth muscle
- aortic, antagonism of phentolamine against exogenously administered and endogenously released norepinephrine in, 310
  - aortic, comparison of retentions of methoxamine and norepinephrine in, 91
- Sodium
- transport and metabolism in toad bladder, effect of bendroflumethiazide on, 203
  - transport in human erythrocyte ghosts, drugs affecting, 211
- Sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, jumping activity induced by, role of sympathetic nervous system, 170
- Splanchnic nerve, stimulation, cholinergic agents and, comparison of differential secretion of adrenal catecholamines by, 69
- Splanchnicotomy, influence on nicotine-induced inhibition of contractile activity in stomach and duodenum of dog, 377
- Spleen, perfused, cat, effects of metabolic inhibitors on norepinephrine release from, 342
- Stitzel, R. E., *see* Urquilla, P. R., 310
- Stomach
- of dog, duodenum and, influence of nicotine on contractile activity in, 377
  - of dog, duodenum and, inhibition of contractile activity by nicotine and catecholamines in, 367
- Stowe, C. M., *see* Sharma, R. P., 128
- Strobel, G. E. and Bianchi, C. P.: The effects of pH gradients on the action of procaine and lidocaine in intact and desheathed sciatic nerves, 1
- Strobel, G. E. and Bianchi, C. P.: The effects of pH gradients on the uptake and distribution of C<sup>14</sup>-procaine and lidocaine in intact and desheathed sciatic nerve trunks, 18
- Strophanthidin, effect on interaction of Ca<sup>++</sup> with mitochondria, 180
- Strychnine, lack of effect on responses of mammalian autonomic ganglia to  $\gamma$ -aminobutyric acid, 384
- Su, C. and Bevan, J. A.: The release of H<sup>3</sup>-norepinephrine in arterial strips studied by the technique of superfusion and transmural stimulation, 62
- Suarez-Kurtz, G. and Bianchi, C. P.: Sites of action of SKF 525-A in nerve and muscle, 33
- Succinylcholine, lack of effect on contracture produced by RP-12278, 44
- Sulfhydryl inhibitors, effects on release of norepinephrine from spleen, 342
- Sullivan, L. P., *see* McDougal, B., 203
- Swingle, K. F., Grant, T. J., Jaques, L. W. and Kvam, D. C.: Interactions of anti-inflammatory drugs in carrageenan-induced foot edema of the rat, 423
- Sympathetic nerve, stimulation, effects of phenoxybenzamine, cocaine and tripeleminamine on release of norepinephrine-H<sup>3</sup> during, 52
- Sympathetic nervous system, role of, jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Sympathomimetic amines, mephentermine and, evaluation of vasodilation produced by, 297
- Synephrine, lack of effect of catechol-O-methyltransferase inhibition by 4-tropolone acetamide on responses in rabbit aortic strips, 320
- Tachyphylaxis, reversal by norepinephrine, 266
- Takahashi, S., *see* Yanagita, T., 163
- Temperature, elevation in mice exhibiting jumping activity induced by sodium 5-(1,3-dimethylbutyl)-5-ethyl barbiturate, 170
- Tetracaine, effect on sodium transport in red cell ghosts, 211
- Tetraethylammonium

- effect on action potentials and cycle length in guinea-pig atria, 255
- ions, actions on potassium fluxes in frog sartorius muscle, 230
- Tetrodotoxin, blockade of release of  $H^+$ -norepinephrine by arterial strips, 62
- Thiazide, effect of bendroflumethiazide on sodium transport and metabolism in toad bladder, 203
- Thiopental, studies on distribution and metabolism in cattle, sheep, goats and swine, 128
- Tissue, adipose, of cattle, sheep, goats and swine, concentrations of thiopental in, 128
- $\beta$ -TM 10, effect on pharmacological, biochemical and morphological changes induced by denervation of nictitating membrane of cat, 77
- Tolazoline, reduction of nicotine- and catecholamine-induced inhibition of contractile activity in stomach and duodenum of dog by, 367
- Transverse tubules, frog sartorius muscle, effect of tetraethylammonium ions on, 230
- Trendelenburg, U., Maxwell, R. A. and Pluchino, S.: Methoxamine as a tool to assess the importance of intraneuronal uptake of *l*-norepinephrine in the cat's nictitating membrane, 91
- Trendelenburg, U., *see* Pluchino, S., 77
- Tripeleminamine
- decreased potentiation of norepinephrine responses by cocaine after, 320
  - phenoxybenzamine, cocaine and, effect on release of histamine- $C^{14}$  and norepinephrine- $H^+$ , 52
- 4-Tropolone acetamide, increase of contractile responses of adrenergic amines in rabbit aortic strips, 320
- d*-Tubocurarine
- failure to inhibit positive inotropic response to gallamine, 266
  - lack of effect on contracture produced by RP-12278, 44
- Tyramine
- antagonism of effects by phentolamine in rabbit aortic strips, 310
  - competitive inhibition of uptake of  $H^+$ -bethanidine by heart slices, 100
  - effects of acidosis on chronotropic responses to, 289
- Tyrosine, circulating, daily rhythm in accumulation of brain catecholamines synthesized from, 416
- Tyrosine hydroxylase, influence of H44/68 on, 332
- Urine, of cattle, sheep, goats and swine, excretion of thiopental in, 128
- Urquilla, P. R., Stitzel, R. E. and Fleming, W. W.: The antagonism of phentolamine against exogenously administered and endogenously released norepinephrine in rabbit aortic strips, 310
- Vachon, M. and Marchand, C.: The influence of morphine on magnesium metabolism in rats, 122
- Vagotomy, influence on nicotine-induced inhibition of contractile activity in stomach and duodenum of dog, 377
- Van Orden, L. S., III, *see* Pluchino, S., 77
- Vasodilation, produced by mephentermine and certain other sympathomimetic amines, evaluation of, 297
- Vein, portal, rabbit, relaxation by mephentermine, 297
- Ventricle, right, of guinea pigs, effects of six cardiac glycosides on transmembrane potential and contractile characteristics of, 188
- Volle, R. L.: The actions of tetraethylammonium ions of potassium fluxes in frog sartorius muscle, 230
- Watrous, W. M., May, D. G. and Fujimoto, J. M.: Mechanism of the renal tubular transport of morphine and morphine ethereal sulfate in the chicken, 224
- Weise, V. K., *see* Krauss, K. R., 282
- Wiseman, E. H., Gralla, E. J., Chiaini, J., Migliardi, J. R. and Chang, Y.-H.: Dioxoisquinoline-4-carboxanilides, novel nonsteroidal anti-inflammatory agents with a species-specific effect on basal metabolism, 138
- Wurtman, R. J., *see* Zigmond, M. J., 416
- Wuttke, W. and Kelleher, R. T.: Effects of some benzodiazepines on punished and unpunished behavior in the pigeon, 397
- Yamamoto, H., *see* Kirpekar, S. M., 342
- Yanagita, T. and Takahashi, S.: Development of tolerance to and physical dependence on barbiturates in rhesus monkeys, 163
- Yoo, C. S. and Lee, W. C.: Blockade of the cardiac action of phenylephrine by bretylium or cocaine, 274
- Zigmond, M. J. and Wurtman, R. J.: Daily rhythm in the accumulation of brain catecholamines synthesized from circulating  $H^+$ -tyrosine, 416