

# INDEX TO VOLUME 71

## AUTHOR INDEX

### A

- ADEAGBO, A.S.O. & OKPAKO, D.T. Mechanism of nor-adrenaline potentiation by prostaglandin  $E_2$  in rat mesenteric artery, 75
- AHLUWALIA, P. & SINGHAL, R.L. Effect of low-dose lithium administration and subsequent withdrawal on biogenic amines in rat brain, 601
- ALI, B.H. & BARTLET, A.L. Inhibition of monoamine oxidase by furazolidone in the chicken and the influence of the alimentary flora thereon, 219
- ALLAN, G., EAKINS, K.E., KULKARNI, P.S. & LEVI, R. Inhibition of thromboxane  $A_2$  biosynthesis in human platelets by burimamide, 143
- ALLEN, KAREN E., CLARK, E.R. & JORDAN, V.C. Evidence for the metabolic activation of non-steroidal anti-oestrogens: a study of structure-activity relationships, 83
- ALLOTT, C.P., EVANS, D.P. & MARSHALL, P.W. A model of irritant-induced bronchoconstriction in the spontaneously breathing guinea-pig, 165
- ALMOTREFI, A.A. & BAKER, J.B.E. Investigation of the anti-fibrillatory activity of some anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitors in the rabbit isolated heart: comparison with phenytoin and mexiletine, 635
- OLLEY, P.M. The response of the isolated ductus arteriosus to transmural stimulation and drugs, 419
- BOWDLER, JULIE M., GREEN, A. RICHARD & RAWLE, FRANCES C. Brain and serum calcium concentrations following electroconvulsive shock or bicuculline-induced convulsions in rats, 321
- BRAY, M.A., FORD-HUTCHINSON, A.W., SHIPLEY, M.E. & SMITH, M.J.H. Calcium ionophore A23187 induces release of chemokinetic and aggregating factors from polymorphonuclear leukocytes, 507
- BRETAG, A.H., DAWE, S.R., KERR, D.I.B. & MOSKWA, A.G. Myotonia as a side-effect of diuretic action, 467
- BRETZ, U., DEWALD, B., PAYNE, T. & SCHNYDER, J. Phagocytosis stimulates the release of a slow reacting substance in cultured macrophages, 631
- BROWN, D.A., FORWARD, A. & MARSH, S. Antagonist discrimination between ganglionic and ileal muscarinic receptors, 362
- BUTCHERS, P.R., SKIDMORE, I.F., VARDEY, C.J. & WHEELDON, A. Characterization of the receptor mediating the anti-anaphylactic effects of  $\beta$ -adrenoceptor agonists in human lung tissue *in vitro*, 663

### B

- BAKER, J.B.E. *see* ALMOTREFI, A.A., 635
- BARLOW, R.B. The size of hydroxyl groups in solution and the changes in size associated with the ionization of phenolic, carboxylic and amino groups in phenolic quaternary ammonium salts, nicotine and some amino acids: possible implications for drug-water and drug-receptor interactions, 17
- BARLOW, R.B. & RAMTOOLA, SHENAZ The size of the hydroxyl group and its contribution to the affinity of atropine for muscarinic-sensitive acetylcholine receptors, 31
- BARTLET, A.L. *see* ALI, B.H., 219
- BELLET, M., ELGHOZI, J.L., MEYER, P., PERNOLLET, M.G. & SCHMITT, H. Central cardiovascular effects of narcotic analgesics and enkephalins in rats, 365
- BENNETT, A., JAROSIK, C., SANGER, G.J. & WILSON, D.E. Antagonism of prostanoid-induced contractions of rat gastric fundus muscle by SC19220, sodium meclofenamate, indomethacin or trimethoquinol, 169
- BERESFORD, ROSEMARY A. & FASTIER, F.N. Effects of some S-alkylthiuroniums and related compounds on the osmotic fragility and the membrane expansion of human erythrocytes, 253
- BESSER, G.M., DELITALA, G., GROSSMAN, ASHLEY, STUBBS, W.A. & YEO, T. Chlorpromazine, haloperidol, metaclopramide and domperidone release prolactin through dopamine antagonism at low concentrations but paradoxically inhibit prolactin release at high concentrations, 569
- BODACH, E., COCEANI, F., DUMBRILLE, A., OKPAKO, D.T. & CAMPBELL, WILLIAM B., GRAHAM, ROBERT M., JACKSON, EDWIN K., LOISEL, DANIEL P. & PETTINGER, WILLIAM A. Effect of indomethacin on hydralazine-induced renin and catecholamine release in the conscious rabbit, 529
- CHEVILLARD, C., MATHIEU, M.N. & RECOMMIS, D. Prejunctional actions of piritridol on the isolated kidney of the rabbit: comparison with apomorphine, 513
- CLANACHAN, A.S. & MARSHALL, R.J. Potentiation of the effects of adenosine on isolated cardiac and smooth muscle by diazepam, 459
- CLARK, E.R. *see* ALLEN, KAREN E., 83
- COCEANI, F. *see* BODACH, E., 419
- COHENM JACKIE, ECKSTEIN, LEAH & GUTMEN, YEHUDA The mechanism of  $\alpha$ -adrenergic inhibition of catecholamine release, 135
- CONWAY, E.L. & JARROTT, B. Clonidine distribution in the rat: temporal relationship between tissue levels and blood pressure response, 473
- COUTURIER, E. & MALAISSE, W.J. Synergistic effects of hypoglycaemic sulphonylureas and antibiotic ionophores upon calcium translocation, 315
- COX, BARRY & ENNIS, CHRISTINE Mechanism of action of dopamine on the guinea-pig gastro-oesophageal junction *in vitro*, 177

### C

### D

- DAS, M., GANGULY, D.K. & VEDASIROMONI, J.R. Anti-tremor action of  $C_{10}$ Dichol, a peripheral acetylcholine synthesis inhibitor, 349

- DAWE, S.R. *see* BRETAG, A.H., 467
- DAWSON, W. & SWEATMAN, W.J.F. The pharmacology of isamoxole [2-methyl-N-butyl-N(4-methyloxazol-2-yl)-propanamide] LRCL 3950, a new anti-allergic compound, 387
- DEKANSKI, J.B. Anti-prostatic activity of bifuranol, a fluorinated bibenzyl, 11
- DELITALA, G. *see* BESSER, G.M., 569
- DEHPUR, A.R., KHOYI, M.A., KOUTCHEKI, H. & ZARRINDAST, M.R. Pharmacological study of the anococcygeus muscle of the dog, 35
- DEWALD, B. *see* BRETZ, G., 631
- DOCHERTY, J.R. & MCGRATH, J.C. A comparison of the effects of pancuronium bromide and its monoquaternary analogue, Org NC 45, on autonomic and somatic neurotransmission in the rat, 225
- DOGGRELL, SHEILA A. & SCOTT, G.W. The occurrence of post-synaptic  $\alpha$ - and  $\beta$ -adrenoceptors in the guinea-pig gall bladder, 185
- DOGGRELL, SHEILA A. & SCOTT, G.W. The effects of time and indomethacin on contractile responses of the guinea-pig gall bladder *in vitro*, 429
- DOGGRELL, SHEILA A. & VINCENT, LYNN Accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- DOWDLE, E.B. & MASKE, R. The effects of dipyridamole on the guinea-pig ileal longitudinal muscle-myenteric plexus preparation, 235
- DOWDLE, E.B. & MASKE, R. The effects of calcium concentration on the inhibition of cholinergic neurotransmission in the myenteric plexus of guinea-pig ileum by adenine nucleotides, 245
- DUMBRILLE, A. *see* BODACH, E., 419
- E**
- EAKINS, K.E. *see* ALLAN, G., 157
- ECKSTEIN, LEAH *see* COHEN, JACKIE, 135
- EL TAHIR, K.E.H. & WILLIAMS, K.I. Factors affecting prostacyclin formation by the rat pregnant myometrium, 641
- ELGHOZI, J.L. *see* BELLET, M., 365
- ELLIOTT, J. *see* JHAMANDAS, K., 211
- ENNIS, CHRISTINE *see* COX, BARRY, 177
- ENNS, LOUISE & MCCOY, E.E. A study of  $\gamma$ -aminobutyric acid uptake in normal and Down's syndrome platelets, 553
- EVANS, D.P. *see* ALLOTT, C.P., 165
- F**
- FASTIER, F.N. *see* BERESFORD, ROSEMARY A., 253
- FIELDEN, R., SUTTON, T.J. & TAYLOR, E.M. Effect of tilting on the pressor responses to McN-A-343, a muscarinic sympathetic ganglion stimulant, 287
- FORD-HUTCHINSON, A.W. *see* BRAY, M.A., 507
- FORWARD, A. *see* BROWN, D.A., 362
- G**
- GANGULY, D.K. *see* DAS, M., 349
- GERBER, JOHN G., NIES, ALAN S. & OLSON, RICHARD D. Prazosin does not alter canine renin release in response to systemic hypotension or intrarenal isoprenaline and prostaglandin  $\text{I}_2$  infusion, 533
- GHELANI, A.M., HOLROYDE, M.C. & SHEARD, P. Response of human isolated bronchial and lung parenchymal strips to SRS-A and other mediators of asthmatic bronchospasm, 107
- GRAHAM, ROBERT M. *see* CAMPBELL, WILLIAM B., 529
- GRANT, JACQUELINE A. & SCRUTTON, MICHAEL C. Interaction of selective  $\alpha$ -adrenoceptor agonists and antagonists with human and rabbit blood platelets, 121
- GREEN, A. RICHARD *see* BOWDLER, JULIE M., 321
- GRIPENBERG, J., HEINONEN, E. & JANSSEN, S.-E. Uptake of radiocalcium by nerve endings isolated from rat brain: kinetic studies, 265
- GRIPENBERG, J., HEINONEN, E. & JANSSEN, S.-E. Uptake of radiocalcium by nerve endings isolated from rat brain: pharmacological studies, 273
- GROSSMAN, ASHLEY *see* BESSER, G.M., 569
- GUTMAN, YEHUDA *see* COHEN, JACKIE, 135
- H**
- HEINONEN, E. *see* GRIPENBERG, J., 265
- HEINONEN, E. *see* GRIPENBERG, J., 273
- HITCHCOCK, MARGARET Stimulation of the antigen-induced contraction of guinea-pig trachea and immunological release of histamine and SRS-A from sensitized guinea-pig lung by (2-isopropyl-(3-indolyl)-3-pyridyl ketone (L8027) and indomethacin, 65
- HITCHCOCK, MARGARET Effect of variation in endogenous levels of ascorbic acid on the *in vitro* immunological release of histamine and slow reacting substance of anaphylaxis from actively sensitized guinea-pig lung fragments, 539
- HO, WILLIAM K.W., NAKAO, K. & SHIBATA, S. The inhibitory action of two thrombin inhibitors (TI-189 and TI-233) on the contractile responses to 5-hydroxytryptamine and prostaglandin endoperoxide analogue (U-44069) in isolated vascular strips, 399
- HOLMAN, MOLLIE E. & SURPENANT, ANNMARIE An electrophysiological analysis of the effects of noradrenaline and  $\alpha$ -receptor antagonists on neuromuscular transmission in mammalian muscular arteries, 651
- HOLROYDE, M.C. *see* GHELANI, A.M., 107
- HUIDOBRO-TORO, J. PABLO Antidiuretic effect of  $\beta$ -endorphin and morphine in Brattleboro rats: development of tolerance and physical dependence after chronic morphine treatment, 51
- HYSLOP, DEBORAH K. & TAYLOR, DUNCAN P. The interaction of trazodone with rat brain muscarinic cholinergic receptors, 359
- I**
- ILLES, P. *see* SCHULZ, R. Inhibition of neuroeffector transmission by morphine in the vas deferens of naive and morphine-treated mice, 195
- ISHIDA, YUKISATO, OZAKI, HIROSHI & SHIBATA, SHOJI Vasorelaxant action of caroverine fumarate (a quinoxaline derivative), a calcium-blocking agent, 343

- ISHIDA, YUKISATO & SHIBATA, SHOJI Characteristic contractile response to the calcium ionophore, A23187, in guinea-pig vas deferens, 581
- ISHIZAKI, TAKASHI & TAWARA, KAZUJI Absence of changes in drug disposition and catecholamine sensitivity in the hyperthyroid dog, 143

## J

- JACKSON, EDWIN K. *see* CAMPBELL, WILLIAM B., 529
- JANSSON, S.-E. *see* GRIPENBERG, J., 265
- , *see* GRIPENBERG, J., 273
- JAROSIK, C. *see* BENNETT, A., 169
- JARROTT, B. *see* CONWAY, E.L., 473
- JHAMANDAS, K. & ELLIOTT, J. Investigation of action of enkephalin on the spontaneous and evoked release of acetylcholine from rat cortical and striatal slices, 211
- JHAMANDAS, KHEM & SUTAK, MAJJA Action of enkephalin analogues and morphine on brain acetylcholine release: differential reversal by naloxone and an opiate pentapeptide, 201
- JOHNS, E.J. A comparison of the ability of two angiotensin II receptor blocking drugs, 1-Sar,8-Ala-angiotensin II and 1-Sar,8-Ile-angiotensin II, to modify the regulation of glomerular filtration rate in the cat, 499
- JORDAN, V.C. *see* ALLEN, KAREN E., 83

## K

- KANAZAWA, T., OHASHI, H. & TAKEWAKI, T. Evidence that cell bodies of non-cholinergic excitatory neurones which supply the smooth muscle of the chicken rectum are located in the ganglia of Remak's nerve, 519
- KARASHIMA, TSUYOSHI Actions of nitro-glycerine on smooth muscles of the guinea-pig and rat portal veins, 489
- KAŽIĆ, TOMISLAV & MILOSAVLJEVIĆ, DRAGIGA Interaction between adenosine triphosphate and noradrenaline in the isolated vas deferens of the guinea-pig, 93
- KENAKIN, TERRY P. Errors in the measurement of agonist potency-ratios produced by uptake processes: a general model applied to  $\beta$ -adrenoceptor agonists, 407
- KERR, D.I.B. *see* BRETAG, A.H., 467
- KERWIN, R.W., OLPE, H.-R. & SCHMUTZ, M. The effect of sodium-*n*-dipropyl acetate on  $\gamma$ -aminobutyric acid dependent inhibition in the rat cortex and substantia nigra in relation to its anticonvulsant activity, 545
- KHOVI, M.A. *see* DEHPUR, A.R. 35
- KLUGMAN, K.P., LEMBECK, F., MARKOWITZ, S., MITCHELL, G. & ROSENDORFF, C. Substance P increases hypothalamic blood flow via an indirect adrenergic-cholinergic interaction, 623
- KNEPEL, W. & MEYER, D.K. Influence of converting enzyme inhibition on the release of vasopressin induced by angiotensin, 337
- KOMORI, S., OHASHI, H. & TAKEWAKI, T. The effects of  $\alpha$ - and  $\beta$ -adrenoceptor activation on tension and membrane properties of the longitudinal smooth muscle of the chicken rectum, 479
- KOUTCHEKI, H. *see* DEHPUR, A.R., 35
- KUDO, YOSHIHISA & SHIBATA, SHOJI The potent depolariz-

ing action of palytoxin isolated from *Palythoa tubercurosa* on the isolated spinal cord of the frog, 575

KULKARNI, P.S. *see* ALLAN, G., 157

KUNOS, GEORGE, MUCCI, LUCIA & O'REGAN, SEANA The influence of hormonal and neuronal factors on rat heart adrenoceptors, 371

## L

- LABURN, HELEN, MITCHELL, D. & STEPHEN, J. Effects of intracerebroventricular floctafenine and indomethacin on body temperature in febrile rabbits, 525
- LECLERC, G., ROUOT, B., SCHWARTZ, J., VELLY, J. & WERMUTH, C.G. Studies on some *para*-substituted clonidine derivatives that exhibit an  $\alpha$ -adrenoceptor stimulant activity, 5
- LEMBECK, F. *see* KLUGMAN, K.P., 623
- LEVI, R. *see* ALLAN, G., 157
- LOISEL, DANIEL P. *see* CAMPBELL, WILLIAM B., 529

## M

- MCCOY, E.E. *see* ENNS, LOUISE, 553
- MCCULLOCH, M.W. *see* MAJEWSKI, H., 435
- MACDONALD, A. & MCGRATH, J.C. The distribution of adrenoceptors and other drug receptors between the two ends of the rat vas deferens as revealed by selective agonists and antagonists, 445
- MCGRATH, J.C. *see* DOCHERTY, J.R., 225
- , *see* MACDONALD, A., 445
- MCQUEEN, D.S. & RIBEIRO, J.A. Inhibitory actions of methionine-enkephalin and morphine on the cat carotid chemoreceptors, 297
- MAJEWSKI, H., MCCULLOCH, M.W., RAND, M.J. & STORY, D.F. Adrenaline activation of prejunctional  $\beta$ -adrenoceptors in guinea-pig atria, 435
- MALASSE, W.J. *see* COUTURIER, E., 315
- MARKOWITZ, S. *see* KLUGMAN, K.P., 623
- MARSH, S. *see* BROWN, D.A., 362
- MARSHALL, P.W. *see* ALLOTT, C.P., 165
- MARSHALL, R.J. *see* CLANACHAN, A.S., 459
- MARSHALL, R.J. & PARRATT, J.R. Prophylactic lignocaine and early post-coronary artery occlusion dysrhythmias in anaesthetized greyhounds, 597
- MARTIN, R.J. The effect of  $\gamma$ -aminobutyric acid on the input conductance and membrane potential of *Ascaris* muscle, 99
- MASKE, R. *see* DOWDLE, E.B., 235
- , *see* DOWDLE, R.B., 245
- MATHIEU, M.N. *see* CHEVILLARD, C., 513
- MEYER, D.K. *see* KNEPEL, W., 337
- MEYER, P. *see* BELLET, M., 365
- MILOSAVLJEVIĆ, DRAGIGA *see* KAŽIĆ, TOMISLAV, 93
- MITCHELL, D. *see* LABURN, HELEN, 525
- MOSKWA, A.G. *see* BRETAG, A.H., 467
- MUCCI, LUCIA *see* KUNOS, GEORGE, 371
- MULVANY, M.J. & NYBORG, N. An increased calcium sensitivity of mesenteric resistance vessels in young and adult spontaneously hypertensive rats, 585

## N

- NAKAO, K. *see* HO, WILLIAM K.W., 399  
 NIES, ALAN S. *see* GERBER, JOHN G., 533  
 NORTH, R.A. & VITEK, L.V. A study of the role of cyclic adenosine 3',5'-monophosphate in the depression by opiates and opioid peptides of excitatory junction potentials in the mouse vas deferens, 307  
 NYBORG, N. *see* MULVANY, M.J., 585

## O

- OHASHI, H. *see* KANAZAWA, T., 519  
 —, *see* KOMORI, S., 479  
 OKPAKO, D.T. *see* ADEAGBO, A.S.O., 75  
 —, *see* BODACH, E., 419  
 OLLEY, P.M. *see* BODACH, E., 419  
 OLPE, H.-R. *see* KERWIN, R.W., 545  
 OLSON, RICHARD D. *see* GERBER, JOHN G., 533  
 O'REGAN, SEANA *see* KUNOS, GEORGE, 371  
 OSBORNE, NEVILLE N. Binding of [<sup>3</sup>H]-muscimol, a potent  $\gamma$ -aminobutyric acid receptor agonist, to membranes of the bovine retina, 259  
 OZAKI, HIROSHI *see* ISHIDA, YUKISATO, 343

## P

- PARRATT, J.R. *see* MARSHALL, R.J., 597  
 PAYNE, T. *see* BRETZ, G., 631  
 PERNOLLET, M.G. *see* BELLET, M., 365  
 PETTINGER, WILLIAM A. *see* CAMPBELL, WILLIAM B., 529

## R

- RAMTOOLA, SHENAZ *see* BARLOW, R.B., 31  
 RAND, M.J. *see* MAJEWSKI, H., 435  
 RAWLE, FRANCES C. *see* BOWDLER, JULIE M., 321  
 RECOMMIS, D. *see* CHEVILLARD, C., 513  
 RIBEIRO, J.A. *see* MCQUEEN, D.S., 297  
 ROSENDORFF, C. *see* KLUGMAN, K.P., 623  
 ROUOT, B. *see* LECLERC, G., 5

## S

- SANGER, G.J. *see* BENNETT, A., 169  
 SAUVIAT, MARTIN-PIERRE Effects of ervatamine chlorhydrate on cardiac membrane currents in frog atrial fibres, 41  
 SCHNYDER, J. *see* BRETZ, G., 631  
 SCHMITT, H. *see* BELLET, M., 365  
 SCHMUTZ, M. *see* KERWIN, R.W., 545  
 SCHULZ, R. *see* ILLES, P., 195  
 SCHWARTZ, J. *see* LECLERC, G., 5  
 SCOTT, GERALD W. *see* DOGGRELL, SHEILA A., 429  
 SCOTT, G.W. *see* DOGGRELL, SHEILA A., 185  
 SHEARD, P. *see* GHELANI, A.M., 107

- SHIBATA, S. *see* HO, WILLIAM K.W., 399  
 SHIBATA, SHOJI *see* ISHIDA, YUKISATO, 343  
 —, *see* ISHIDA, YUKISATO, 581  
 —, *see* KUDO, YOSHIHISA, 575  
 SHIPLEY, M.E. *see* BRAY, M.A., 507  
 SILINSKY, E.M. Evidence for specific adenosine receptors at cholinergic nerve endings, 191  
 SINGHAL, R.L. *see* AHLUWALIA, P., 601  
 SKIDMORE, I.F. *see* BUTCHERS, P.R., 663  
 SMART, T.G. Do motor-nerve terminals have  $\gamma$ -aminobutyric acid receptors?, 279  
 SMITH, M.J.H. *see* BRAY, M.A., 507  
 SONNENFELD, T. & WENNMALM, A. Inhibition by nicotine of the formation of prostacyclin-like activity in rabbit and human vascular tissue, 609  
 SPEDDING, M. Effects of metoclopramide and isoprenaline in the rat vas deferens; interactions with  $\alpha$ -adrenoceptors, 113  
 STEPHEN, J. *see* LABURN, HELEN, 525  
 STORY, D.F. *see* MAJEWSKI, H., 435  
 STUBBS, W.A. *see* BESSER, G.M., 569  
 SUMMERS, R.J. [<sup>3</sup>H]-clonidine binding to  $\alpha$ -adrenoceptors in membranes prepared from regions of guinea-pig kidney: alteration by monovalent and divalent cations, 57  
 SURPENANT, ANNMARIE *see* HOLMAN, MOLLIE E., 651  
 SUTAK, MAJAJA *see* JHAMANDAS, KHEM, 201  
 SUTTON, T.J. *see* FIELDEN, R., 287  
 SWEATMAN, W.J.F. *see* DAWSON, W., 387

## T

- TAKEWAKI, T. *see* KANAZAWA, T., 519  
 —, *see* KOMORI, S., 479  
 TAYLOR, DUNCAN P. *see* HYSLOP, DEBORAH K., 359  
 TAYLOR, E.M. *see* FIELDEN, R., 287  
 TAYLOR, W.J., WOLF, A. & YOUNG, J.M. The interaction of amine local anaesthetics with muscarinic receptors, 327

## V

- VARDEY, C.J. *see* BUTCHERS, P.R., 663  
 VEDASIROMONI, J.R. *see* DAS, M., 349  
 VELLY, J. *see* LECLERC, G., 5  
 VINCENT, LYNN *see* DOGGRELL, SHEILA A., 557  
 VITEK, L.V. *see* NORTH, R.A., 307

## W

- WENNMALM, A. *see* SONNENFELD, T., 609  
 WERMUTH, C.G. *see* LECLERC, G., 5  
 WHEELDON, A. *see* BUTCHERS, P.R., 663  
 WILLIAMS, K.I. *see* EL TAHIR, K.E.H., 641  
 WILSON, D.E. *see* BENNETT, A., 169  
 WINSLOW, EILEEN Evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity, 615  
 WOLF, A. *see* TAYLOR, W.J., 327

## Y

YEO, T. *see* BESSER, G.M., 569

YOUNG, J.M. *see* TAYLOR, W.J., 327

## Z

ZARRINDAST, M.R. *see* DEHPOUR, A.R., 35

## SUBJECT INDEX

### A

- A23187**, calcium ionophore, characteristic contractile response to, in guinea-pig vas deferens, 581
- , calcium ionophore, effect of, on effects of hypoglycaemic sulphonylureas on calcium translocation across the plasma membrane, 315
  - , calcium ionophore, aggregatory response induced by, to clonidine, phenylephrine and methoxamine in human blood platelets and to adrenaline, UK14304 and clonidine in rabbit blood platelets, 121
- Acetazolamide**, the diuretic, myotonia induced by, in rat isolated diaphragm, soleus and extensor digitorum longus muscles and frog isolated sartorius muscle, 467
- Acetylcholine**, effect of, on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- , effect of, on contractile response of guinea-pig gall bladder *in vitro* to electrical field stimulation, effects of time and indomethacin on, 429
  - , response of ductus arteriosus from near-term guinea-pigs and lambs to, effect of transmural stimulation on, 419
  - , muscarinic binding site for, in rat brain, interaction of trazodone with, 359
  - , endogenous response of guinea-pig ileal longitudinal muscle-myenteric plexus preparation to, effects of adenosine and adenine nucleotides on, 245
  - , release of, from guinea-pig ileal longitudinal muscle-myenteric plexus preparation, effect of dipyridamole on, 235
  - , spontaneous and evoked release of, investigation of action of enkephalin on, from rat cortical and striatal slices, 211
  - , release of, from brain, actions of enkephalin analogues and morphine on, differential reversal by naloxone and an opiate pentapeptide, 201
  - , release of, from cholinergic nerve endings to frog skeletal muscle, effects of adenosine and adenine nucleotides on, 191
  - , chemo-excitation evoked by, in cat carotid body, effect of met-enkephalin on, 297
  - , response of human isolated bronchial and lung parenchymal strips to, 107
  - , contractions due to, in guinea-pig vas deferens, effect of acetylcholine on, 93
  - , effect of, on dog anococcygeus muscle, 35
- Acetylcholine receptors**, muscarinic-sensitive, in the guinea-pig ileum, size of the hydroxyl group and its contribution to the affinity of atropine for, 31
- Acetylcholine synthesis inhibitor**, peripheral,  $\text{C}_{10}$ Dichol, anti-tremor action of, in mice, 349
- $\gamma$ -Acetylenic  $\gamma$ -aminobutyric acid**, an anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitor, antifibrillatory activity of, in rabbit isolated heart, compared with phenytoin and mexiletine, 635
- Aconitine**, dysrhythmias induced by, in mice, evaluation of antagonism of, as a method of detecting and assessing antidysrhythmic activity, 615
- Adenine**, derivatives of, interactions of, with dipyridamole in guinea-pig ileal longitudinal muscle-myenteric plexus preparation, 235
- Adenine nucleotides**, effects of calcium concentration on the inhibition of cholinergic neurotransmission in the myenteric plexus of guinea-pig ileum by, 245
- , effects of, on cholinergic nerve endings to frog skeletal muscle, 191
- Adenosine**, and analogues, effects of, on cholinergic nerve endings to frog skeletal muscle, 191
- , effect of, on effects of calcium concentration on the contractile response of guinea-pig ileal longitudinal muscle-myenteric plexus preparation to electrical field stimulation, 245
  - , potentiation by diazepam of effects of, on responses of rat isolated vas deferens and guinea-pig isolated left atria to electrical field stimulation, 459
- [ $^3\text{H}$ ]-adenosine**, uptake of, by guinea-pig ileal longitudinal muscle-myenteric plexus preparation, effect of dipyridamole on, 235
- Adenosine deaminase**, activity of, in guinea-pig ileal longitudinal muscle-myenteric plexus preparation, effect of dipyridamole on, 235
- Adenosine monophosphate**, dibutyryl cyclic, a study of the role of, in the depression by opiates and opioid peptides of excitatory junction potentials in the mouse vas deferens, 307
- , effect of, on effects of calcium concentration on the contractile response of guinea-pig ileal longitudinal muscle-myenteric plexus preparation to electrical field stimulation, 245
  - , dibutyryl cyclic, effect of, on potassium-induced uptake of radiocalcium by nerve endings isolated from rat brain, 273
- Adenosine 3',5'-monophosphate**, cyclic, a study of the role of, in the depression of opiates and opioid peptides of excitatory junction potentials in the mouse vas deferens, 307
- Adenosine 5'-pyrophosphate**, platelet aggregation induced by, in human platelet-rich plasma, effect of incubates of rings of human and rabbit vascular tissue (containing prostacyclin-like activity) on, 609
- Adenosine receptors**, evidence for, at cholinergic nerve endings in frog skeletal muscle, 191
- Adenosine triphosphate**, effect of, on dog anococcygeus muscle, 35
- , interaction between, and noradrenaline in the isolated vas deferens of the guinea-pig, 93
  - , non-hydrolysable derivatives of, effects of, on cholinergic nerve endings to frog skeletal muscle, 191
  - , effect of, on effects of calcium concentration on the contractile response of guinea-pig ileal longitudinal muscle-myenteric plexus preparation to electrical field stimulation, 245
  - , effect of, on effects of calcium concentration on the

- contractile response of guinea-pig ileal longitudinal muscle-myenteric plexus preparation to electrical field stimulation, 245
- Adenosine 5'-triphosphate**, effect of, on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- , effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
- , effect of, on contractile response of guinea-pig gall bladder *in vitro* to electrical field stimulation, effects of time and indomethacin on, 429
- Adenosine triphosphatases**, Na, K- and Mg, membrane, effects of  $\alpha$ -adrenoceptor agonists on activity of, in membranes from bovine adrenal medulla and rat submaxillary gland, 135
- Adenosine uptake inhibitors**, effects of, on effect of adenosine on responses of rat isolated vas deferens and guinea-pig isolated left atria to electrical field stimulation, 459
- Adenylate cyclase inhibitor**, SQ22536, effects of, on aggregatory response to adrenaline and clonidine, and on effect of A23187, in human and rabbit blood platelets, 121
- Adrenal medulla**, bovine, membranes from, effects of  $\alpha$ -adrenoceptor agonists on membrane adenosine triphosphatase activity in, 135
- Adrenaline**, pro-aggregatory response to, in human and rabbit blood platelets, effects of  $\alpha$ -adrenoceptor agonists and antagonists on, 121
- , pressor effects of, effect of tilting on effect of mecamylamine on, in anaesthetized cats, 287
- , activation by, of prejunctional  $\beta$ -adrenoceptors in guinea-pig atria, 435
- , plasma, hydralazine-induced release of, in conscious rabbit, effect of indomethacin on, 529
- , effect of, on isolated longitudinal smooth muscle from chicken rectum, 479
- (—)-**Adrenaline**, effect of, on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- , effect of, on anaphylactic release of histamine from human lung tissue *in vitro*, 663
- , contractions and relaxation of guinea-pig gall bladder strips induced by, 185
- Adrenergic-cholinergic interaction**, substance P increases hypothalamic blood flow via, 623
- $\alpha$ -Adrenergic inhibition**, mechanism of, of catecholamine release in bovine adrenal medullary and rat submaxillary gland, 135
- Adrenergic innervation**, in longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, action of dopamine on, 177
- Adrenergic nerve stimulation**, effects of pancuronium bromide on, in rat anococcygeus muscle and vas deferens *in vivo* and *in vitro*, 225
- Adrenergic nerve terminals**, effects of  $\alpha$ -adrenoceptor agonists on catecholamine release from, 135
- $\beta$ -Adrenoceptor activity**, in ductus arteriosus from near-term guinea-pigs and lambs, 419
- Adrenoceptor agonists**, relative potencies of effects of, in rat heart adrenoceptors, 371
- $\alpha$ -Adrenoceptor agonists**, effects of, on membrane adenosine triphosphatase activity in membranes from bovine adrenal medulla and rat submaxillary gland, 135
- , selective, interaction of, with human and rabbit blood platelets, 121
- $\beta$ -Adrenoceptor agonists**, characterization of the receptor mediating the anti-anaphylactic effects of, in human lung tissue *in vitro*, 663
- , a general model for errors in the measurement of agonist potency-ratios produced by uptake processes as applied to, 407
- Adrenoceptor agonists and antagonists**, selective, distribution of adrenoceptors and other drug receptors between the two ends of the rat vas deferens as revealed by, 445
- Adrenoceptor antagonists**, relative potencies of effects of, in rat heart adrenoceptors, 371
- ,  $\alpha_1$ - and  $\beta$ -effects of, on effects of phenylephrine and isoprenaline on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- $\alpha$ -Adrenoceptor antagonists**, an electrophysiological analysis of the effects of, on neuromuscular transmission in mammalian muscular arteries, 651
- , selective, interaction of, with human and rabbit blood platelets, 121
- , effect of, on responses of ductus arteriosus from near-term guinea-pigs and lambs to noradrenaline and acetylcholine, effect of transmural stimulation on, 419
- Adrenoceptor blockade**, effect of, on effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- $\beta$ -Adrenoceptor stimulant**, trimethoquinol, antagonism by, of prostanoid-induced contractions of rat gastric fundus muscle, 169
- $\alpha$ -Adrenoceptor stimulant activity**, studies on some *para*-substituted clonidine derivatives that exhibit, in rat aortic strips, rat brain synaptosome preparation and in the anaesthetized pithed rat, 5
- Adrenoceptors**, in rat heart, influence of hormonal and neuronal factors on, 371
- , distribution of, between the two ends of the rat vas deferens as revealed by selective agonists and antagonists, 445
- $\alpha$ -Adrenoceptors**, binding of [ $^3\text{H}$ ]-clonidine to, in membranes prepared from regions of guinea-pig kidney: alterations by monovalent and divalent cations, 57
- , effects of noradrenaline related to effects of adenosine triphosphate on, in guinea-pig isolated vas deferens, 93
- , interactions of metoclopramide and isoprenaline with, in the rat isolated vas deferens, 113
- , postsynaptic and presynaptic, presence of, in guinea-pig gall bladder, 557
- $\beta$ -Adrenoceptors**, prejunctional, in guinea-pig atria, adrenaline activation of, 435
- $\alpha$ - and  $\beta$ -Adrenoceptors**, postsynaptic, in guinea-pig gall bladder, 185
- , activation of, effects of, on tension and membrane properties of the longitudinal smooth muscle of the chicken rectum, 479
- Aggregating factors**, release of, from rat and human polymorphonuclear leukocytes induced by calcium ionophore A23187, 507
- Agonist potency-ratios**, errors in the measurement of, produced by uptake processes, a general model applied to  $\beta$ -adrenoceptor agonists, 407

- Alimentary flora**, influence of, on inhibition of monoamine oxidase by furazolidone in the chicken, 219
- S-alkylthiuroniums**, effects of, on the osmotic fragility and the membrane expansion of human erythrocytes, 253
- Amine local anaesthetics**, interaction of, with muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- Amines**, biogenic, in rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601
- Amino acids**, changes in size of hydroxyl groups associated with the ionization of amino groups in, possible implications for drug-water and drug-receptor interactions, 17
- 3 $\alpha$ -Amino-5 $\alpha$ -androstan-2 $\beta$ -ol-17-one hydrochloride**, evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- $\gamma$ -Aminobutyric acid**, effect of, on the input conductance and membrane potential of *Ascaris* muscle, 99
- , effect of, on miniature endplate potentials at frog and mouse neuromuscular junctions, 279
- , effect of, on binding of [ $^3$ H]-muscimol, a potent  $\gamma$ -aminobutyric acid agonist, to membranes of the bovine retina, 259
- , uptake of, in normal and Down's syndrome platelets, 553
- , inhibition dependent on, in rat cortex and substantia nigra, effect of sodium-*n*-dipropyl acetate on, in relation to its anticonvulsant activity, 545
- $\gamma$ -Aminobutyric acid receptors**, do frog and mouse motor-nerve terminals have these?, 279
- $\gamma$ -Aminobutyric acid transaminase inhibitor**, gabaculine, effect of valproate sodium on inhibitory responses to  $\gamma$ -aminobutyric acid in rats treated with, 545
- $\gamma$ -Aminobutyric acid transaminase inhibitors**, anticonvulsant, investigation of the antifibrillatory activity of, in rabbit isolated heart, compared with phenytoin and mexiletine, 635
- para-Aminoclonidine**,  $\alpha$ -adrenoceptor stimulant activity of, in rat aortic strip, rat brain synaptosome preparation and in the anaesthetized pithed rat, studies on, 5
- Amino groups**, changes in size of hydroxyl groups associated with the ionization of, in phenolic quaternary ammonium salts, nicotine, and some amino acids, possible implications for drug-water and drug-receptor interactions, 17
- Amino-oxyacetic acid**, an anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitor, antifibrillatory activity of, in rabbit isolated heart, compared with phenytoin and mexiletine, 635
- Aminopyrine demethylase**, in chicken liver, effect of furazolidone on, 219
- 3-Amino-1-(*m*-(trifluoromethyl)-phenyl)-2-pyrazoline**, effect of, on release of a slow reacting substance from cultured mouse peritoneal macrophages, 631
- Amisriptyline**, muscarinic receptor binding of trazodone compared with, in rat brain, 359
- Anaesthetics**, local amine, interaction of, with muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- Analgesics**, narcotic, central cardiovascular effects of, in rats, 365
- Anaphylactic release**, of histamine, effects of  $\beta$ -adrenoceptor agonists on, in human lung tissue *in vitro*, 663
- Anaphylaxis**, slow reacting substance of, stimulation of antigen-induced immunological release of, from guinea-pig sensitized lung by (2-isopropyl-3-indolyl)-3 pyridyl ketone (L8027) and indomethacin, 65
- , slow reacting substance of, response of human isolated bronchial and lung parenchymal strips to, and other mediators of asthmatic bronchospasm, 107
- , slow reacting substance of, immunological release of, from sensitized human and guinea-pig chopped lung *in vitro*, effect of isamoxole, a new anti-allergic compound, on, 387
- , slow reacting substance of, *in vitro* immunological release of, from actively sensitized guinea-pig lung fragments, effect of ascorbic acid on, 539
- Androgen**, stimulation of the prostate in castrated rats by, effect of bifuranol, a fluorinated bibenzyl, on, 11
- Angiotensin**, pressor effects of, on effect of tilting on effect of mecamlamine on, in anaesthetized cats, 287
- Angiotensins I, II and III**, influence of converting enzyme inhibition on the release of vasopressin induced by, in rats, 337
- 1-Sar,8-Ala-angiotensin II**, ability of, to modify the regulation of glomerular filtration rate in the cat, 499
- 1-Sar,8-Ile-angiotensin II**, ability of, to modify the regulation of glomerular filtration rate in the cat, 499
- Angiotensin II receptor blocking drugs**, a comparison of ability of, to modify the regulation of glomerular filtration rate in the cat, 499
- Anococcygeus muscle**, of the dog, pharmacological study of, 35
- , rat, effects of pancuronium bromide on adrenergic nerve stimulation in, *in vivo* and *in vitro*, 225
- Anthracycline-9-carboxylic acid**, myotonia induced by, in rat isolated diaphragm, soleus and extensor digitorum muscles and frog isolated sartorius muscle, 467
- Anti-aggregatory activity**, platelet, formation of, in rabbit aorta and human peripheral vein, effect of nicotine and indomethacin on, 609
- Anti-allergic compound**, new, isamoxole, pharmacology of, in animals, 387
- Anti-anaphylactic effects**, of  $\beta$ -adrenoceptor agonists in human lung tissue *in vitro*, characterization of the receptor mediating, 663
- Anti-androgenic studies**, on bifuranol, a fluorinated bibenzyl, in mice and rats, 11
- Antibiotic ionophores**, synergistic effects of, and hypoglycaemic sulphonylureas upon calcium translocation across the plasma membrane, 315
- Anticonvulsant activity**, effect of sodium-*n*-dipropyl acetate on  $\gamma$ -aminobutyric acid dependent inhibition in the rat cortex and substantia nigra in relation to, 545
- Anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitors**, investigation of the antifibrillatory activity of, in rabbit isolated heart, compared with phenytoin and mexiletine, 635
- Antidiuresis**, induced by morphine in Brattleboro rats, 51
- Antidiuretic effect**, of  $\beta$ -endorphin and morphine in Brattleboro rats: development of tolerance and physical dependence after chronic morphine treatment, 51
- Antidysrhythmic activity**, evaluation of antagonism of aco-

- nitine-induced dysrhythmias in mice as a method of detecting and assessing, 615
- Anti-fertility studies**, on bifluranol, a fluorinated bibenzyl, in rats and mice, 11
- Antifibrillatory activity**, investigation of, of some anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitors in the rabbit isolated heart, compared with phenytoin and mexiletine, 635
- Antigen**, stimulation of contraction induced by, in guinea-pig trachea and immunological release of histamine and slow-reacting substance of anaphylaxis from sensitized guinea-pig lung by (2-isopropyl-3-indolyl)-3 pyridyl ketone (L8027) and indomethacin, 65
- Antihæmolytic agents**, procaine and chlorpromazine, effects of, on critical hæmolytic volume of human erythrocytes, 253
- Antimuscarinic property**, of C<sub>10</sub>Dichol, role of, in anti-tremor action in mice, 349
- Anti-oestrogens**, non-steroidal, evidence for the metabolic activation of, a study of structure-activity relationships, 83
- Anti-Parkinson drugs**, peripherally-acting, development of, 349
- Anti-prostatic activity**, of bifluranol, a fluorinated bibenzyl, in rats and mice, 11
- Antipyretic actions**, of intracerebroventricular floctafenine and indomethacin in febrile rabbits, 525
- Antipyrine**, disposition kinetics of, in thyroid-fed dogs, compared with euthyroid and phenobarbitone-pre-treated dogs, to study relative contribution of hepatic drug metabolizing enzymes and hepatic blood flow to clearance of drugs in the hyperthyroid state, 143
- Anti-tremor action**, of C<sub>10</sub>Dichol, a peripheral acetylcholine synthesis inhibitor, in mice, 349
- Aorta**, rat isolated, vasorelaxant action of caroverine fumarate on pressor responses to potassium chloride and noradrenaline in, 343
- , rabbit, inhibition by nicotine of the formation of prostacyclin-like activity in, 609
- Aortic microsomes**, dog, effect of burimamide on prostacyclin synthetase in, 157
- Aortic strip**, rat, studies on some *para*-substituted clonidine derivatives that exhibit an  $\alpha$ -adrenoceptor stimulant activity in, 5
- Aortic strips**, rabbit, inhibitory action of thrombin inhibitors (TI-189 and TI-233) on the contractile responses to 5-hydroxytryptamine and prostaglandin endoperoxide analogue (U-44069) in, 399
- Apomorphine**, actions of, on rabbit isolated kidney, compared with prejunctional actions of pibibedil, 513
- Aprindine**, evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- 9- $\beta$ -D-Arabinofuranosyladenine**, effect of, on cholinergic nerve endings to frog skeletal muscle, 191
- Arachidonate**, sodium, human platelet aggregation induced by, effect of burimamide on, 157
- Arachidonic acid**, metabolism of, lipoxigenase pathways of, aggregating and chemokinetic activities induced by calcium ionophore A23187 in rat and human polymorphonuclear leukocytes represent generation of biologically active products of, 507
- , contractile response to, in rabbit aortic strips, effect of thrombin inhibitors (TI-189 and TI-233) on, 399
- , effect of, on prostacyclin formation by rat pregnant myometrium, 641
- , effect of, on release of a slow reacting substance from cultured mouse peritoneal macrophages, 631
- Arecoline**, tremor and neuromuscular paralysis induced by, effect of C<sub>10</sub>Dichol on, in mice, 349
- Arginine derivatives**, developed as thrombin inhibitors (TI-189 and TI-233), inhibitory actions of, on the contractile responses to 5-hydroxytryptamine and prostaglandin endoperoxide analogue (U-44069) in rabbit aortic strips, 399
- Ascaris muscle**, effect of  $\gamma$ -aminobutyric acid on the input conductance and membrane potential of, 99
- Ascorbic acid**, effect of variation in endogenous levels of, on the *in vitro* immunological release of histamine and slow reacting substance of anaphylaxis from actively sensitized guinea-pig lung fragments, 539
- Aspartate transaminase**, in plasma, effect of furazolidone on, in the chicken, 219
- Asthmatic bronchospasm**, response of human isolated bronchial and lung parenchymal strips to slow reacting substance of anaphylaxis and other mediators of, 107
- Atria**, guinea-pig isolated left, responses of, to electrical field stimulation, effect of diazepam on effects of adenosine and 2-chloroadenosine on, 459
- , guinea-pig, prejunctional  $\beta$ -adrenoceptors in, adrenaline activation of, 435
- , guinea-pig, sensitization of, to noradrenaline, isoprenaline and salbutamol produced by an inhibitor of neuronal (cocaine) and extraneuronal (metanephrine) uptake, compared to a theoretical model, 407
- , rat isolated, influence of hormonal and neuronal factors on adrenoceptors mediating cardiac force and rate of contraction in, 371
- Atrial fibres**, frog, effects of ervatamine chlorhydrate on cardiac membrane currents in, 41
- Atropine**, effect of, on contractile response of guinea-pig gall bladder *in vitro* to electrical field stimulation, effects of time and indomethacin on, 429
- , effect of, on vasodilator effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- , effect of, on contractile response of guinea-pig vas deferens to calcium ionophore, A23187, 581
- , effect of, on effect of electrical field stimulation on accumulation and overflow of <sup>3</sup>H following incubation of guinea-pig gall bladder with [<sup>3</sup>H]-noradrenaline, 557
- , effect of, on responses of ductus arteriosus from near-term guinea-pigs and lambs to noradrenaline and acetylcholine, effect of transmural stimulation on, 419
- , effect of, on effect of propranolol on contractions induced by electrical stimulation in guinea-pig gall bladder strips, 185
- , effect of, on effect of citric acid aerosol on breathing in the guinea-pig, 165
- , effect of, on effect of mecamlamine on effect of tilting on the pressor responses to McN-A-343, a muscarinic sympathetic ganglion stimulant, in anaesthetized cats and dogs, 287
- , size of the hydroxyl group and its contribution to the

affinity of, for muscarine-sensitive acetylcholine receptors in the guinea-pig ileum, 31

—, effect of, on dog anococcygeus muscle, 35

**Autonomic neurotransmission**, a comparison of effects of pancuronium bromide and its monoquaternary analogue, Org NC 45, on, and somatic neurotransmission in the rat, 225

## B

**Barbiturate**, effect of, on vasodilator effect of substance P on hypothalamic blood flow in conscious rabbits, 623

**Basilar arterial strips**, dog, inhibitory action of thrombin inhibitors (TI-189 and TI-233) on the contractile responses to 5-hydroxytryptamine in, 399

**Benoxaprofen**, effect of, on release of aggregating and chemokinetic factors from rat and human polymorphonuclear leukocytes, 507

**Bibenzyl**, fluorinated, bifluranol, anti-prostatic activity of, in rats and mice, 11

**Bicarbonate**, effect of, on vasodilator effect of substance P on hypothalamic blood flow in conscious rabbits, 623

**Bicuculline**, convulsions induced by, in rats, brain and serum calcium concentrations following, 321

**Bifluranol**, a fluorinated bibenzyl, anti-prostatic activity of, in rats and mice, 11

**Biogenic amines**, in rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601

**Blood flow**, hepatic, relative contribution of, and hepatic drug metabolizing enzymes to clearance of drugs in the hyperthyroid state in the dog, 143

—, renal, changes in, induced by stimulation of renal nerve in the cat, effects of angiotensin II receptor blocking drugs on, 499

—, hypothalamic, in conscious rabbits, effect of substance P on, via an indirect adrenergic-cholinergic interaction, 623

**Blood platelets**, human and rabbit, interaction of selective  $\alpha$ -adrenoceptor agonists and antagonists with, 121

**Blood pressure**, temporal relationship between tissue distribution and response of, to clonidine in the rat, 473

—, effect of tilting on effect of McN-A-343, a muscarinic sympathetic ganglion stimulant, on, in anaesthetized dogs and cats, 287

**Body temperature**, effects of intracerebroventricular floctafenine and indomethacin on, in febrile rabbits, 525

**Brain**, clonidine level in, temporal relationship between, and blood pressure response in the rat, 473

—, rat, muscarinic cholinceptors, interaction of trazodone with, in, 359

—, rat, nerve endings isolated from, pharmacological studies of uptake of radiocalcium by, 273

—, rat, nerve endings isolated from, kinetic studies of uptake of radiocalcium by, 265

—, chicken, effect of furazolidone on monoamine oxidase in, 219

—, acetylcholine release from, actions of enkephalin analogues and morphine on, differential reversal by naloxone and an opiate pentapeptide, 201

—, guinea-pig, crude synaptosomal preparations from, interaction of amine local anaesthetics with muscarinic receptors in, 327

—, calcium concentration in, following electroconvulsive shock or bicuculline-induced convulsions in rats, 321

—, rat, effect of low-dose lithium administration and subsequent withdrawal on biogenic amines in, 601

**Brain synaptosome preparation**, rat, studies on some *para*-substituted clonidine derivatives that exhibit an  $\alpha$ -adrenoceptor stimulant activity in, 5

**Bradycardia**, induced by morphine, fentanyl and [D-Ala<sup>2</sup>]-met-enkephalin-amide in rats, 365

**Bradykinin**, effect of, on effect of isamoxole, a new anti-allergic compound, on activity of slow reacting substance of anaphylaxis in guinea-pig ileum *in vitro*, 387

**Breathing**, in guinea-pig, effect of citric acid aerosol on, 165

**Bretylum**, effect of, on responses of ductus arteriosus from near-term guinea-pigs and lambs to noradrenaline and acetylcholine, effect of transmural stimulation on, 419

—, effect of, on effects of prostaglandins E<sub>2</sub> and F<sub>2 $\alpha$</sub>  on vasoconstrictor responses to noradrenaline and methoxamine, 75

**Bronchial muscle**, human, effect of isamoxole, a new anti-allergic compound, on, 387

**Bronchial parenchymal strips**, human, response of, to slow reacting substance of anaphylaxis and other mediators of asthmatic bronchospasm, 107

**Bronchoconstriction**, induced by slow reacting substance of anaphylaxis in human bronchial muscle, effect of isamoxole, a new anti-allergic compound, on, 387

—, irritant-induced, a model of, in the spontaneously breathing guinea-pig, 165

**Bronchospasm**, asthmatic, response of human isolated bronchial and lung parenchymal strips to slow reacting substance of anaphylaxis and other mediators of, 107

**Bumetanide**, myotonia induced by, in rat isolated diaphragm, soleus and extensor digitorum muscles and frog isolated sartorius muscle, 467

**Bupivacaine**, effect of, on binding of (–)-[<sup>3</sup>H]-quinuclidinyl benzilate to muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327

**Burimamide**, inhibition of thromboxane A<sub>2</sub> biosynthesis from prostaglandin endoperoxides in human platelets by, 157

**BW755C**, effect of, on release of aggregating and chemokinetic factors from rat and human polymorphonuclear leukocytes, 507

—, effect of, on release of a slow reacting substance from cultured mouse peritoneal macrophages, 631

## C

**Calcium**, brain and serum concentrations of, following electroconvulsive shock or bicuculline-induced convulsions in rats, 321

—, translocation of, across the plasma membrane, synergistic effects of hypoglycaemic sulphonylureas and antibiotic ionophores upon, 315

—, effect of, on effect of caroverine fumarate on pressor responses to potassium chloride and noradrenaline in rat hindquarter preparation and rat isolated aorta, 343

- , effects of, on the inhibition of cholinergic neurotransmission in the myenteric plexus of guinea-pig ileum by adenine nucleotides, 245
- , increased sensitivity to, of mesenteric resistance vessels in young and adult spontaneously hypertensive rats, 585
- <sup>45</sup>Calcium**, efflux and uptake of, effects of  $\alpha$ -adrenoceptor agonists on, in membranes from bovine adrenal medulla and rat submaxillary gland, 135
- , uptake of, by nerve endings isolated from rat brain, pharmacological studies of, 273
- , uptake of, by nerve endings isolated from rat brain, kinetic studies of, 265
- Calcium-blocking agent**, caroverine fumarate, vasorelaxant action of, in the rat hindquarter preparation and rat isolated aorta, 343
- Calcium ion**, effect of, on [<sup>3</sup>H]-clonidine binding to  $\alpha$ -adrenoceptors in membranes prepared from regions of guinea-pig kidney, 57
- , effect of, on effects of prostaglandins E<sub>2</sub> and F<sub>2x</sub> on vasoconstrictor responses to noradrenaline and methoxamine, 75
- , effect of, on contractile response of guinea-pig vas deferens to calcium ionophore, A23187, 581
- , effect of, on depolarizing action of palytoxin isolated from *Palythoa tuberculosa* on frog isolated spinal cord, 575
- Calcium ionophores**, synergistic effects of, and hypoglycaemic sulphonylureas upon calcium translocation across the plasma membrane, 315
- Calcium ionophore**, A23187, aggregatory response induced by, to clonidine, phenylephrine and methoxamine in human blood platelets and to adrenaline, UK14304 and clonidine in rabbit blood platelets, 121
- , A23187, characteristic contractile response to, in guinea-pig vas deferens, 581
- , A23187, release of chemokinetic and aggregating factors from rat and human polymorphonuclear leukocytes induced by, 507
- Carbachol**, contractile response of longitudinal muscle strips from guinea-pig intestine to, effects of amine local anaesthetics on, 327
- , applied to the nerve terminal of frog and mouse, effects of, 279
- Carboxylic groups**, changes in size of hydroxyl groups associated with the ionization of, in phenolic quaternary ammonium salts, nicotine and some amino acids, possible implications for drug-water and drug-receptor interactions, 17
- Cardiac force**, in rat isolated atria, influence of hormonal and neuronal factors on adrenoceptors mediating, 371
- Cardiac membrane currents**, effects of ervatamine chlorhydrate on, in frog atrial fibres, 41
- Cardiac muscle**, of guinea-pig isolated left atria, potentiation by diazepam of effects of adenosine on responses of, to electrical field stimulation, 459
- Cardiac neurotransmission**, sympathetic and parasympathetic, effects of pancuronium bromide and its monoquaternary analogue, Org NC 45, on, in the rat, 225
- Cardiovascular effects**, central, of narcotic analgesics and enkephalins in rats, 365
- Carotid body**, cat, naloxone-sensitive, opiate receptors in, 297
- Carotid chemoreceptors**, cat, inhibitory actions of methionine-enkephalin and morphine on, 297
- Caroverine fumarate**, a quinoxaline derivative and calcium-blocking agent, vasorelaxant action of, in the rat hindquarter preparation and rat isolated aorta, 343
- Catecholamines**, release of, in adrenal medulla and rat submaxillary gland, mechanism of  $\alpha$ -adrenergic inhibition of, 135
- , sensitivity to, absence of changes in, in the hyperthyroid dog, 143
- , plasma, hydralazine-induced release of, in conscious rabbit, effect of indomethacin on, 529
- Cerebellum**, clonidine level in, temporal relationship between, and blood pressure response in the rat, 473
- Chemokinetic factors**, release of, from rat and human polymorphonuclear leukocytes induced by calcium ionophore A23187, 507
- Chemoreceptors**, cat carotid, inhibitory actions of methionine-enkephalin and morphine on, 297
- Chloride ion**, effect of, on effect of  $\gamma$ -aminobutyric acid on miniature endplate potentials at frog and mouse neuromuscular junctions, 279
- 2-Chloroadenosine**, effect of, on cholinergic nerve endings to frog skeletal muscle, 191
- , effect of diazepam on effect of, on responses of guinea-pig isolated left atria and rat isolated vas deferens to electrical field stimulation, 459
- Chlorpromazine**, effect of an opiate pentapeptide on action of morphine on brain acetylcholine release, 201
- , antihemolytic concentration of, effect of, on critical hemolytic volume of human erythrocytes, 253
- , at low and high concentrations, effects of, on dopamine-mediated prolactin release from rat anterior pituitary cells, 569
- para-Chlorotamoxifen**, oestrogenic and anti-oestrogenic activities of, in immature rat uterine weight test, 83
- Cholinergic nerve endings**, to frog skeletal muscle, evidence for specific adenosine receptors at, 191
- Cholinergic neurotransmission**, effects of calcium concentration on inhibition of, in the myenteric plexus of guinea-pig ileum by adenine nucleotides, 245
- Cholinoceptor blockade**, effect of, on vasodilator effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- Cholinoceptors**, muscarinic, in rat brain, interaction of trazodone with, 359
- Chromaffin cells**, effects of  $\alpha$ -adrenoceptor agonists on catecholamine release from, 135
- Chronotropic response**, to isoprenaline, use of, to evaluate catecholamine hypersensitivity in hyperthyroid dogs, 143
- Cimetidine**, effect of, on thromboxane A<sub>2</sub> biosynthesis from prostaglandin endoperoxides in human platelet microsomes, 157
- , effect of, on dog anococcygeus muscle, 35
- Citric acid aerosol**, bronchoconstriction induced by, in anaesthetized guinea-pig, effect of bilateral vagal section on, 165
- Clomipramine**, muscarinic receptor binding of trazodone compared with, in rat brain, 359
- Clonidine**, effect of metaclopramide on effect of, on contractions of rat isolated vas deferens induced by electrical field stimulation, 113

- , analogue of, UK14304, aggregatory and pro-aggregatory responses induced by, in human and rabbit blood platelets, effects of  $\alpha$ -adrenoceptor agonists and antagonists on, 121
- , effect of, on membrane adenosine triphosphatase activity in membranes from bovine adrenal medulla and rat submaxillary gland, 135
- , effect of, on pro-aggregatory and aggregatory responses in rabbit and human blood platelets induced by adrenaline, 121
- , and *para*-substituted derivatives of, that exhibit an  $\alpha$ -adrenoceptor stimulant activity in rat aortic strip, rat brain synaptosome preparation and in the anaesthetized pithed rat, studies on, 5
- , effect of, on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- , distribution of, in the rat, temporal relationship between tissue levels and blood pressure response, 473
- , effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
- , effect of, on effect of electrical field stimulation on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- [ $^3\text{H}$ ]-clonidine, binding of, to  $\alpha$ -adrenoceptors in membranes prepared from regions of guinea-pig kidney: alterations by monovalent and divalent cations, 57
- Cocaine**, effect of, on effects of dopamine and tyramine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- , an inhibitor of neuronal uptake, sensitization of guinea-pig atria and trachea to noradrenaline, isoprenaline and salbutamol produced by, compared to a theoretical model, 407
- , effect of, on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- Converting enzyme**, inhibition of, influence of, on the release of vasopressin induced by angiotensin in rats, 337
- Converting enzyme inhibitor**, SQ 20881, effect of, on the release of vasopressin induced by angiotensin in rats, 337
- Convulsions**, electroshock-induced, in rats, anticonvulsant property of valproate sodium on, 545
- , induced by bicuculline in rats, brain and serum calcium concentrations following, 321
- Coronary arterial strips**, dog, inhibitory action of thrombin inhibitors (TI-189 and TI-233) on the contractile response to 5-hydroxytryptamine in, 399
- Coronary artery**, acute ligation of, effect of prophylactic lignocaine on ventricular ectopic beats caused by, in anaesthetized greyhounds, 597
- Corpus striatum**, clonidine level in, temporal relationship between, and blood pressure response in the rat, 473
- Cortex**, rat, effect of sodium-*n*-dipropyl acetate on  $\gamma$ -aminobutyric acid dependent inhibition in, in relation to its anticonvulsant activity, 545
- Cortical slices**, rat, investigation of action of enkephalin on the spontaneous and evoked release of acetylcholine from, 211

- Cortisone**, effect of, on effect of thyroidectomy on adrenoceptor response of rat isolated atria to, 371
- Cyanide**, sodium, chemo-excitation evoked by, in cat carotid body, effect of met-enkephalin on, 297
- Cyclo-oxygenase**, effect of burimamide on, in sheep seminal vesicle, 157
- Cyclo-oxygenase inhibitor**, sodium meclofenamate, antagonism by, of prostanoid-induced contractions of rat gastric fundus muscle, 169
- Cysteine**, effect of, on release of a slow reacting substance from cultured mouse peritoneal macrophages, 631

## D

- Decamethylene bis-(hydroxyethyl)-dimethylammonium bromide**, a peripheral acetylcholine synthesis inhibitor, anti-tremor action of, in mice, 349
- S-*n*-decylthiuronium**, effects of, and related compounds on osmotic fragility and membrane expansion of human erythrocytes, 253
- 2'-Deoxyadenosine**, effect of, on cholinergic nerve endings to frog skeletal muscle, 191
- 5'-Deoxyadenosine**, effect of, on cholinergic nerve endings to frog skeletal muscle, 191
- Desipramine**, effect of, on effect of pibedil on noradrenaline release evoked by electrical stimulation of sympathetic renal nerve in rabbit isolated kidney, 513
- , muscarinic receptor binding of trazodone compared with, in rat brain, 359
- Desmethylimipramine**, effect of, on effects of dopamine and tyramine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- Diaphragm muscle**, rat isolated, myotonia induced by diuretics in, 467
- Diazepam**, effect of, on brain and serum calcium concentrations following bicuculline-induced convulsions in rats, 321
- , potentiation by, of effects of adenosine on responses of guinea-pig isolated left atria and rat isolated vas deferens to electrical field stimulation, 459
- Diazoxide**, effect of, on effects of antibiotic ionophores on calcium translocation across the plasma membrane, 315
- Dibenzylamine**, effect of, on responses of ductus arteriosus from near-term guinea-pigs and lambs to noradrenaline and acetylcholine, effect of transmural stimulation on, 419
- 2,4-Dichlorophenoxyacetic acid**, myotonia induced by, in rat isolated diaphragm, soleus and extensor digitorum muscles and frog isolated sartorius muscle, 467
- Diethylstilboestrol**, oestrogenic potency of, compared with bifluranol, a fluorinated dibenzyl, in mice and rats, 11
- [ $^3\text{H}$ ]-**dihydroalprenolol**, binding of, in rat isolated atria, effect of hypophysectomy on, 371
- 3,4-Dihydroxyphenylacetic acid**, rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601
- Dimethyl phenylpiperazinium iodide**, pressor responses to, effect of tilting on, in anaesthetized cat, 287
- 2,4-Dinitrophenol**, effect of, on  $\gamma$ -aminobutyric acid uptake in normal and Down's syndrome platelets, 553
- 4-Diphenylacetoxy-N-methylpiperidine methiodide**, com-

- parison of effects of, on muscarinic receptors in rat isolated superior cervical ganglia and ileal segments, 362
- Dipyridamole**, effect of, on inhibition of cholinergic transmission in the myenteric plexus of the guinea-pig ileum by adenine nucleotides, 245
- , an adenosine uptake inhibitor, effect of, on effect of adenosine on responses of rat isolated vas deferens and guinea-pig isolated left atria to electrical field stimulation, 459
  - , effects of, on guinea-pig ileal longitudinal muscle-myenteric plexus preparation, 235
- Disopyramide**, evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- Disposition kinetics**, of antipyrine and propranolol in thyroid-fed dogs, compared with euthyroid and phenobarbitone-pretreated dogs, to study relative contribution of hepatic drug metabolizing enzymes and hepatic blood flow to clearance of drugs in the hyperthyroid state, 143
- Diuretic action**, myotonia as a side-effect of, 467
- Diuretics**, loop, side-effects of, are similar to chemically induced myotonia, 467
- Divalent cations**, effects of, on [ $^3\text{H}$ ]-clonidine binding to  $\alpha$ -adrenoceptors in membranes prepared from regions of guinea-pig kidney, 57
- Domperidone**, effect of, on effects of dopamine and phenylephrine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- , at low and high concentrations, effects of, on dopamine-mediated prolactin release from rat anterior pituitary cells, 569
- Dopamine**, effect of, on potassium-induced uptake of radio-calcium by nerve endings isolated from rat brain, 273
- , mechanism of action of, on the guinea-pig gastro-oesophageal junction *in vitro*, 177
  - , effect of met-enkephalin on effect of, on cat carotid chemoreceptors, 297
  - , rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601
  - , prolactin release mediated by, from rat anterior pituitary cells, effects of chlorpromazine, haloperidol, metoclopramide and domperidone on, at low and high concentrations, 569
- Dopamine antagonists**, effects of, on dopamine-mediated prolactin release, from rat anterior pituitary cells at low and high concentrations, 569
- Down's syndrome platelets**, a study of  $\gamma$ -aminobutyric acid uptake in normal and, 553
- Drug-receptor interactions**, implications for, of changes in size of hydroxyl groups associated with the ionization of phenolic, carboxylic and amino groups in phenolic quaternary ammonium salts, nicotine and amino acids, 17
- Drug-water interactions**, implications for, of changes in size of hydroxyl groups associated with the ionization of phenolic, carboxylic and amino groups in phenolic quaternary ammonium salts, nicotine and some amino acids, 17
- Ductus arteriosus**, from near-term guinea-pigs and lambs, responses of, to transmural stimulation and drugs, 419
- Duodenal mucosa**, chicken, effect of furazolidone on monoamine oxidase in, 219
- Dysrhythmias**, aconitine-induced, in mice, evaluation of antagonism of, as a method of detecting and assessing antidysrhythmic activity, 615
- , resulting from acute coronary artery ligation in anaesthetized greyhounds, effect of prophylactic lignocaine on, 597

## E

- Ear artery**, rabbit, an electrophysiological analysis of the effects of noradrenaline and  $\alpha$ -receptor antagonists on neuromuscular transmission in, 651
- 5,8,11,14-Eicosatetraynoic acid**, effect of, on prostacyclin formation by rat pregnant myometrium, 641
- , effect of, on release of aggregating and chemokinetic factors from rat and human polymorphonuclear leukocytes, 507
- Electrical field stimulation**, effect of atropine and lignocaine on effect of, on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- , responses of rat isolated vas deferens and guinea-pig isolated left atria to, potentiation of effects of adenosine on, by diazepam, 459
  - , contractile responses of the guinea-pig gall bladder *in vitro* to, effects of time and indomethacin on, 429
  - , single pulse, effects of adrenoceptor agonists and antagonists on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to, 445
  - , effect of, on release of catecholamines from guinea-pig atria incubated with adrenaline and [ $^3\text{H}$ ]-noradrenaline, 435
  - , effects of adenosine and adenine nucleotides on effects of calcium concentration on the contractile response of guinea-pig ileal longitudinal muscle-myenteric plexus preparation to, 245
  - , contractions of guinea-pig gall bladder strips induced by, 185
  - , effect of, on dog anococcygeus muscle, 35
  - , contractions of rat isolated vas deferens induced by, effect of metoclopramide on, 113
- Electrical stimulation**, of Remak's nerve trunk, effect of, on nerve branches which supply the smooth muscle of the chicken rectum, 519
- , of sympathetic renal nerve, noradrenaline release evoked by, in rabbit isolated kidney, effects of piritubidil and apomorphine on, 513
  - , transmural, contractions due to, in guinea-pig isolated vas deferens, effect of noradrenaline on effect of adenosine triphosphate on, 93
- Electroconvulsive shock**, brain and serum calcium concentrations following, in rats, 321
- Electroshock**, convulsions induced by, in rats, anticonvulsant property of valproate sodium on, 545
- $\beta$ -Endorphin**, antidiuretic effect of, in Brattleboro rats: development of tolerance and physical dependence after chronic morphine treatment, 51
- Enkephalin**, D-Ala $^2$ -D-Leu $^5$ -, effect of, on excitatory junction potentials in the mouse vas deferens, effect of cyclic adenosine monophosphate on, 307

- , **Methionine-**, inhibitory action of, on the cat carotid chemoreceptors, 297
- Enkephalin analogues**, effects of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
- , actions of, on brain acetylcholine release: differential reversal by naloxone and on opiate pentapeptide, 201
- Enkephalinamide**, [D-Ala<sup>2</sup>]-Met-, central cardiovascular effects of, in rats, 365
- , D-Ala<sup>2</sup>-Met<sup>5</sup>-, effect of, on excitatory junction potentials in the mouse vas deferens, effect of cyclic adenosine monophosphate on, 307
- Enkephalins**, synthetic investigation of action of, on the spontaneous and evoked release of acetylcholine from rat cortical and striatal slices, 211
- , central cardiovascular effects of, in rats, 365
- Epididymal portion**, of rat isolated vas deferens, distribution of adrenoceptors and other drug receptors in, as revealed by selective agonists and antagonists, 445
- Ervatamine chlorhydrate**, effects of, on cardiac membrane currents, in frog atrial fibres, 41
- Erythrocytes**, human, effects of some S-alkylthiuroniums and related compounds on the osmotic fragility and membrane expansion of, 253
- Ethacrynic acid**, myotonia induced by, in rat isolated diaphragm, soleus and extensor digitorum longus muscles and frog isolated sartorius muscle, 467
- Ethinyl oestradiol**, oestrogenic activity of, in immature rat uterine weight test, 83
- Euthyroid dogs**, study of relative contribution of hepatic drug metabolizing enzymes and hepatic blood flow to clearance of drugs in the hyperthyroid state by examining disposition kinetics of antipyrine and propranolol in, 143
- Excitatory junction potentials**, amplitude of, in smooth muscle cells of vas deferens, effect of normorphine on, in naive and morphine-treated mice, 195
- , in the mouse vas deferens, a study of the role of cyclic adenosine 3',5'-monophosphate in the depression of, by opiates and opioid peptides, 307
- Extensor digitorum longus muscle**, rat isolated, myotonia induced by diuretics in, 467

## F

- Febrile rabbits**, effects of intracerebroventricular floctafenine and indomethacin on body temperature in, 525
- Fentanyl**, central cardiovascular effects of, in rats, 365
- Fever**, induced by leucocyte pyrogen, effects of intracerebroventricular floctafenine and indomethacin on body temperature, rabbits with, 525
- Floctafenine**, intracerebroventricular, effects of, on body temperature in febrile rabbits, 525
- Fluorinated bibenzyl**, bifluranol, anti-prostatic activity of, in rats and mice, 11
- para-Fluorotamoxifen**, oestrogenic and anti-oestrogenic activities of, in immature rat uterine weight test, 83
- Follicle stimulating hormone**, effect of bifluranol, a fluorinated bibenzyl, on, in mice and rats, 11

- FPL55712**, effect of, on contraction of guinea-pig ileum induced by a slow reacting substance released from cultured mouse peritoneal macrophages, 631
- , effect of, on response of human isolated bronchial and lung parenchymal strips to slow reacting substance of anaphylaxis, 107
- Frusemide**, the diuretic, myotonia induced in leg muscles in rats treated with, 467
- Fundus**, rat, inhibitory action of thrombin inhibitors (TI-189 and TI-233) on the contractile response to 5-hydroxytryptamine in, 399
- Furazolidone**, inhibition of monoamine oxidase by, in the chicken, influence of the alimentary flora on, 219

## G

- Gabaculine**, a  $\gamma$ -aminobutyric acid transaminase inhibitor, effect of valproate sodium on inhibitory responses to  $\gamma$ -aminobutyric acid in rats treated with, 545
- Gall bladder**, guinea-pig, accumulation and overflow of <sup>3</sup>H following incubation of, with [<sup>3</sup>H]-noradrenaline, 557
- , guinea-pig, *in vitro*, effects of time and indomethacin on contractile responses of, 429
- , guinea-pig, postsynaptic  $\alpha$ - and  $\beta$ -adrenoceptors in, 185
- Gastric fundus muscle**, rat, contractions of, induced by prostanoids, antagonism of, by SC19220, sodium meclofenamate, indomethacin or trimethoquinol, 169
- Gastro-oesophageal junction**, guinea-pig, mechanism of action of dopamine on, *in vitro*, 177
- Gliclazide**, a hypoglycaemic sulphonylurea, effects of antibiotic ionophores on effect of, on calcium translocation across the plasma membrane, 315
- Glomerular filtration rate**, in the cat, a comparison of the ability of two angiotensin II receptor blocking drugs, 1-Sar,8-Ala-angiotensin II and 1-Sar,8-Ile-angiotensin II, to modify the regulation of, 499
- Guanabenz**, effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
- Guanethidine**, effect of, on contractions of dog anococcygeus muscle induced by electrical field stimulation, 35

## H

- H133/22**, effect of, on anaphylactic release of histamine from human lung tissue *in vitro*, 663
- Haemolytic volume**, critical, of human erythrocytes, effects of S-n-decylthiuronium and related compounds on, 253
- Haloperidol**, effect of, on effect of piribedil on noradrenaline release evoked by electrical stimulation of sympathetic renal nerve in rabbit isolated kidney, 513
- , at low and high concentrations, effects of, on dopamine-mediated prolactin release from rat anterior pituitary cells, 569
- , effect of, on effect of dopamine on potassium-induced uptake of radiocalcium by nerve endings isolated from rat brain, 273
- , effect of, on effects of dopamine and phenylephrine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177

- Harmine**, tremor and neuromuscular paralysis induced by, effect of  $C_{10}$ Dichol on, in mice, 349
- Heart**, rat, adrenoceptors in, influence of hormonal and neuronal factors on, 371
- , rabbit isolated, investigation of the antifibrillatory activity of some anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitors in, compared with phenytoin and mexiletine, 635
  - , chicken, effect of furazolidone on monoamine oxidase in, 219
- Heart rate**, in conscious rabbit, effect of indomethacin on effect of hydralazine on, 529
- , in the anaesthetized dog, changes in, in response to systemic hypotension or intrarenal isoprenaline and prostaglandin  $I_2$  infusion, effect of prazosin on, 533
- Hepatic drug metabolizing enzymes**, relative contribution of, and hepatic blood flow to the clearance of drugs in the hyperthyroid state in the dog, 143
- Hexamethonium**, effect of, on effect of electrical stimulation of Remak's nerve trunk on nerve branches which supply the smooth muscle of the chicken rectum, 519
- , nicotine-induced contractions sensitive to, in guinea-pig ileal longitudinal muscle-myenteric plexus preparation, effects of adenosine and adenine nucleotides on, 245
- Hindquarter preparation**, rat, vasorelaxant action of caroverine fumarate on pressor responses to potassium chloride and noradrenaline in, 343
- Histamine**, *in vitro* immunological release of, from actively sensitized guinea-pig lung fragments, effect of variation in endogenous levels of ascorbic acid on, 539
- , effect of, on effect of isamoxole, a new anti-allergic compound, on activity of slow reacting substance of anaphylaxis in guinea-pig ileum *in vitro*, 387
  - , contractile response to, in rabbit aortic strips, effect of thrombin inhibitors (TI-189 and TI-233) on, 399
  - , anaphylactic release of, effects of  $\beta$ -adrenoceptor agonists on, in human lung tissue *in vitro*, 663
  - , effect of, on thromboxane  $A_2$  biosynthesis from prostaglandin endoperoxides in human platelet microsomes, 157
  - , response of human isolated bronchial and lung parenchymal strips to slow reacting substance of anaphylaxis and, 107
  - , stimulation of antigen-induced immunological release of, from sensitized guinea-pig lung by (2-isopropyl-3-indolyl)-3 pyridyl ketone (L8027) and indomethacin, 65
  - , effect of, on dog anococcygeus muscle, 35
- Homovanillic acid**, rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601
- Hormonal factors**, influence of, on rat heart adrenoceptors, 371
- Hydralazine**, plasma renin and catecholamine release induced by, in the conscious rabbit, effect of indomethacin on, 529
- 15-Hydroperoxyarachidonic acid**, effect of, on prostacyclin formation by rat pregnant myometrium, 641
- 5-Hydroxyindoleacetic acid**, rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601
- Hydroxyl group**, size of, and its contribution to the affinity of atropine for muscarine-sensitive acetylcholine receptors in the guinea-pig ileum, 31
- Hydroxyl groups**, size of, in solution and the changes in size associated with the ionization of phenolic, carboxylic and amino groups on phenolic quaternary ammonium salts, nicotine and some amino acids, possible implications for drug-water and drug-receptor interactions, 17
- Hydroxynitrobenzylthioguanosine**, an adenosine uptake inhibitor, effect of, on effect of adenosine on responses of rat isolated *vas deferens* and guinea-pig isolated left atria to electrical field stimulation, 459
- 6-Hydroxydopamine**, chemical sympathectomy with, effect of, on effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- , effect of, on accumulation and overflow of  $^3H$  following incubation of guinea-pig gall bladder with [ $^3H$ ]-noradrenaline, 557
  - , sympathetic denervation of thyroidectomized rats by, effects of, on responses of rat isolated atria to noradrenaline, isoprenaline and propranolol, 371
- 5-Hydroxytryptamine**, rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601
- , effect of, on effect of isamoxole, a new anti-allergic compound, on activity of slow reacting substance of anaphylaxis in guinea-pig ileum *in vitro*, 387
  - , effect of, on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
  - , effect of, on dog anococcygeus muscle, 35
  - , contractile response to, in rabbit aortic strips, inhibitory action of thrombin inhibitors (TI-189 and TI-233) on, 399
- Hyoscine**, effect of, on contraction of guinea-pig ileum induced by a slow reacting substance released from cultured mouse peritoneal macrophages, 631
- Hypertension**, spontaneous, young and adult rats with, an increased calcium sensitivity of mesenteric resistance vessels in, 585
- Hyperthyroidism**, absence of changes in drug disposition and catecholamine sensitivity in dogs with, 143
- Hypoglycaemic sulphonylureas**, synergistic effects of, and antibiotic ionophores upon calcium translocation across the plasma membrane, 315
- Hypophysectomy**, effect of, on effects of isoprenaline, phenylephrine and methoxamine in rat isolated atria, 371
- Hypotension**, systemic, effect of prazosin on canine renin release in response to, 533
- , induced by morphine, fentanyl and [D-Ala $^2$ ]-met-enkephalinamide in rats, 365
  - , orthostatic, anaesthetized cat with, effect of tilting on the pressor responses to dimethyl phenylpiperazinium iodide, 287
- Hypotensive response**, to clonidine, temporal relationship between tissue distribution and, in the rat, 473
- Hypothalamus**, blood flow in, in conscious rabbits, effect of substance P on, via an indirect adrenergic-cholinergic interaction, 623
- I
- Ileal longitudinal muscle-myenteric plexus preparation**, guinea-pig, effects of dipyrindamole on, 235

- , guinea-pig effects of calcium concentration on the inhibition of cholinergic neurotransmission in, by adenosine and adenine nucleotides, 245
  - Ileal segments**, rat isolated, antagonist discrimination between muscarinic receptors in, and in rat isolated superior cervical ganglia, 362
  - Ileum**, guinea-pig, muscarine-sensitive acetylcholine receptors in, size of the hydroxyl group and its contribution to the affinity of atropine for, 31
  - , guinea-pig, myenteric plexus of, effects of calcium concentration on the inhibition of cholinergic neurotransmission in, by adenine nucleotides, 245
  - , guinea-pig, *in vitro*, activity of slow reacting substance of anaphylaxis in, effect of isamoxole, a new anti-allergic compound, on, 387
  - Imidazole**, effect of, on thromboxane A<sub>2</sub> biosynthesis from prostaglandin peroxides in human platelet microsomes, 157
  - Imipramine**, muscarinic receptor binding of trazodone compared with, in rat brain, 359
  - Immunological release**, *in vitro*, of histamine and slow reacting substance of anaphylaxis from actively sensitized guinea-pig lung fragments, effect of variation in endogenous levels of ascorbic acid on, 539
  - , stimulation of antigen-induced, of histamine and slow reacting substance of anaphylaxis from sensitized guinea-pig lung by (2-isopropyl-3-indolyl)-3 pyridyl ketone (L8027) and indomethacin, 65
  - Indapamide**, myotonia induced by, in rat isolated diaphragm, soleus and extensor diaphragm muscles and frog isolated sartorius muscle, 467
  - Indomethacin**, intracerebroventricular, effects of, on body temperature in febrile rabbits, 525
  - , effect of, on release of a slow reacting substance from cultured mouse peritoneal macrophages, 631
  - , effect of, on the formation of prostacyclin-like activity in rabbit and human vascular tissue, 609
  - , effect of, on effect of prazosin on heart rate and plasma renin activity in the anaesthetized dog, 533
  - , effect of, on hydralazine-induced plasma renin and catecholamine release in the conscious rabbit, 529
  - , effects of time and, on contractile responses of the guinea-pig gall bladder *in vitro*, 429
  - , effect of, on prostacyclin formation by rat pregnant myometrium, 641
  - , antagonism by, of prostanoid-induced contractions of rat gastric fundus muscle, 169
  - , stimulation of the antigen-induced contraction of guinea-pig trachea and immunological release of histamine and slow-reacting substance of anaphylaxis from sensitized guinea-pig lung by, 65
  - , effect of, on response of dog anococcygeus muscle to adenosine triphosphate, 35
  - Indoramin**, effect of, on pro-aggregatory response to adrenaline in human and rabbit blood platelets, 121
  - Input conductance**, of *Ascaris* muscle, effect of  $\gamma$ -aminobutyric acid on, 99
  - Ipratropium bromide**, effect of, on effect of citric acid aerosol on breathing in the guinea-pig, 165
  - Isamoxole**, a new anti-allergic compound, pharmacology of, in animals, 387
  - Isoprenaline**, effect of, on isolated longitudinal smooth muscle strips from chicken rectum, 479
  - , intrarenal, and prostaglandin I<sub>2</sub> infusion, effect of prazosin on canine renin release in response to, 533
  - , effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
  - , sensitization of guinea-pig atria and trachea to, produced by an inhibitor of neuronal (cocaine) and extra-neuronal (metanephrine) uptake, compared to a theoretical model, 407
  - , relaxation induced by, in ductus arteriosus from near-term guinea-pigs and lambs, effect of propranolol on, 419
  - , effect of sympathetic denervation of thyroidectomized rats or of hypophysectomy on effect of, on rat isolated atria, 371
  - , effect of, on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
  - , effect of, on effect of citric acid aerosol on breathing in the guinea-pig, 165
  - , chromotropic response to, use of, to evaluate catecholamine hypersensitivity in hyperthyroid dogs, 143
  - , effects of, in the rat vas deferens, interactions with  $\alpha$ -adrenoceptors, 113
  - , effect of, on dog anococcygeus muscle, 35
  - (-)-**Isoprenaline**, relaxation of guinea-pig gall bladder strips induced by, 185
  - , relaxation produced by, in guinea-pig gall bladder *in vitro*, effects of time and indomethacin on, 429
  - , effect of, on accumulation and overflow of <sup>3</sup>H following incubation of guinea-pig gall bladder with [<sup>3</sup>H]-noradrenaline, 557
  - , effect of, on anaphylactic release of histamine from human lung tissue *in vitro*, 663
  - (2-Isopropyl-3-indolyl)-3 pyridyl ketone, stimulation of antigen-induced contraction of guinea-pig trachea and immunological release of histamine and slow reacting substance of anaphylaxis from sensitized guinea-pig lung by, 65
- ## K
- Kidney**, guinea-pig, membranes prepared from regions of, [<sup>3</sup>H]-clonidine binding to  $\alpha$ -adrenoceptors in, alteration by monovalent and divalent cations, 57
  - , clonidine level in, temporal relationship between, and blood pressure response in the rat, 473
  - , rabbit isolated, prejunctional actions of piritbedil on, compared with apomorphine, 513
- ## L
- Labetolol**, an electrophysiological analysis of effect of, on neuromuscular transmission in mammalian muscular arteries, 651
  - Lanthanum quenching technique**, use of, in pharmacological studies of uptake of radiocalcium by nerve endings isolated from rat brain, 273
  - , use of, in kinetic studies of uptake of radiocalcium by nerve endings isolated from rat brain, 265
  - Laurylsulphate**, sodium, effect of, on binding of [<sup>3</sup>H]-muscimol, a potent  $\gamma$ -aminobutyric acid agonist, to membranes of the bovine retina, 259

- Leg muscles**, myotonia induced in, in rats treated with intravenous frusemide, the diuretic, 467
- Leukocytes**, polymorphonuclear, rat and human, release of chemokinetic and aggregating factors from, induced by calcium ionophore A23187, 507
- Lignocaine**, evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- , prophylactic, effect of, on early post-coronary artery occlusion in anaesthetized greyhounds, 597
  - , effect of, on effect of electrical field stimulation on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
  - , effect of, on binding of (–)-[ $^3\text{H}$ ]-quinuclidinyl benzilate to muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- Lipoxygenase pathways**, of arachidonic acid metabolism, aggregating and chemokinetic activities induced by calcium ionophore A23187 in rat and human polymorphonuclear leukocytes represent generation of biologically active products of, 507
- Lithium**, low dose, effect of, and subsequent withdrawal on biogenic amines in rat brain, 601
- Liver**, chicken, effect of furazolidone on monoamine oxidase and aspartate transaminase in, 219
- Local anaesthetics**, amine, interaction of, with muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- Longitudinal muscle**, rat stomach, contractions of, induced by prostanoids, antagonism of, by SC19220, sodium meclofenamate, indomethacin or trimethoquinol, 169
- Longitudinal muscle-myenteric plexus preparation**, guinea-pig ileal, effects of calcium concentration on the inhibition of cholinergic neurotransmission in, by adenosine and adenine nucleotides, 245
- , guinea-pig ileal, effects of dipyrindamole on, 235
- Longitudinal smooth muscle**, of chicken rectum, effects of  $\alpha$ - and  $\beta$ -adrenoceptor activation on tension and membrane properties of, 479
- , strips of, from guinea-pig isolated gastro-oesophageal junction, effects of dopamine, phenylephrine, isoprenaline and clonidine on, 177
- LRCL 3950**, a new anti-allergic compound, pharmacology of, in animals, 387
- Lung**, sensitized human and guinea-pig chopped, *in vitro*, immunological release of slow reacting substance of anaphylaxis from, effect of isamoxole, a new anti-allergic compound, on, 387
- , guinea-pig sensitized, immunological stimulation of antigen-induced release of histamine and slow-reacting substance of anaphylaxis from, by (2-isopropyl-3-indoyl)-3 pyridyl ketone (L8027) and indomethacin, 65
- Lung fragments**, actively sensitized guinea-pig, effect of variation in endogenous levels of ascorbic acid on the *in vitro* immunological release of histamine and slow reacting substance of anaphylaxis from, 539
- Lung parenchymal strips**, human, responses of to slow reacting substance of anaphylaxis and other mediators of asthmatic bronchospasm, 107
- Lung tissue**, human, *in vitro*, characterization of the receptor mediating the anti-anaphylactic effects of  $\beta$ -adrenoceptor agonists in, 663

**Luteinising hormone**, serum, effect of bifluranol, a fluorinated bibenzyl, on, in mice and rats, 11

## M

- Macrophages**, mouse peritoneal, cultured, phagocytosis stimulates the release of a slow reacting substance in, 631
- Magnesium ion**, effect of, on depolarizing action of palytoxin isolated from *Palythoa tuberculosa* on frog isolated spinal cord, 575
- , effect of, on uptake of radiocalcium by nerve endings isolated from rat brain, 265
- McN-A-343**, a muscarinic sympathetic ganglion stimulant, effect of tilting on the pressor responses to, in anaesthetized cats and dogs, 287
- Mean arterial pressure**, in conscious rabbit, effect of indomethacin on effect of hydralazine on, 529
- Mecamylamine**, effect of, on effect of tilting on the pressor responses to McN-A-343, a muscarinic sympathetic ganglion stimulant, in anesthetized cats and dogs, 287
- , effect of, on vasodilator effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- Meclofenamate**, sodium, antagonism by, of prostanoid-induced contractions of rat gastric fundus muscle, 169
- Membrane currents**, cardiac, effects of ervatamine chloride on, in frog atrial fibres, 41
- Membrane expansion**, of human erythrocytes, effects of some S-alkylthiuroniums and related compounds on, 253
- Membrane potential**, of *Ascaris* muscle, effect of  $\gamma$ -aminobutyric acid on, 99
- Membrane potentials**, of smooth muscle cells in rat and guinea-pig portal veins, actions of nitroglycerine on, 489
- Membrane properties**, effects of  $\alpha$ - and  $\beta$ -adrenoceptor activation on, of the longitudinal smooth muscle of the chicken rectum, 479
- Membranes**, of the bovine retina, binding of [ $^3\text{H}$ ]-muscimol, a potent  $\gamma$ -aminobutyric acid receptor agonist, to, 259
- Mepacrine**, effect of, on prostacyclin formation by rat pregnant myometrium, 641
- Mepyramine**, effect of, on contraction of guinea-pig ileum induced by a slow reacting substance released from cultured mouse peritoneal macrophages, 631
- Mersalyl**, myotonia induced by, in rat isolated diaphragm, soleus and extensor digitorum longus muscles and frog isolated sartorius muscle, 467
- Mesenteric artery**, rat, mechanism of noradrenaline potentiation by prostaglandins  $\text{E}_2$  and  $\text{F}_{2\alpha}$  in, 75
- Mesenteric resistance vessels**, in young and adult spontaneously hypertensive rats, an increased calcium sensitivity of, 585
- Mestranol**, oestrogenic activity of, in immature rat uterine weight test, 83
- Metanephrine**, an inhibitor of extraneuronal uptake, sensitization of guinea-pig atria and trachea to noradrenaline, isoprenaline and salbutamol produced by, compared to a theoretical model, 407
- Met-enkephalin**, inhibitory action of, on the cat cardid chemoreceptors, 297

- Methoxamine**, pro-aggregatory response induced by, in and yohimbine on, 121
- , vasoconstrictor responses to, in isolated mesenteric arteries of the rat, effects of prostaglandins E<sub>2</sub> and F<sub>2</sub>, on, 75
  - , effect of hypophysectomy on effect of, on rat isolated atria, 371
- 3-Methoxy-4-hydroxyphenylglycol**, rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601
- para-Methoxytamoxifen**, oestrogenic and anti-oestrogenic activities of, in immature rat uterine weight test, 83
- N<sup>6</sup>-methyladenine**, effect of, on cholinergic nerve endings to frog skeletal muscle, 191
- 2-Methyl-N-butyl-N-(4-methyloxazol-2-yl) propanamide**, a new anti-allergic compound, pharmacology of, in animals, 387
- 1-Methyl-3-isobutyl xanthine**, effect of, on effect of cyclic adenosine monophosphate on excitatory junction potentials in the mouse vas deferens, 307
- N-methylscopolamine**, comparison of effects of, on muscarinic receptors in rat isolated superior cervical ganglia and ileal segments, 362
- para-Methyltamoxifen**, oestrogenic and anti-oestrogenic activities of, in immature rat uterine weight test, 83
- Methysergide**, effect of, on effect of 5-hydroxytryptamine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- , effect of, on dog anococcygeus muscle, 35
- Metamide**, effect of, on thromboxane A<sub>2</sub> biosynthesis from prostaglandin endoperoxides in human platelet microsomes, 157
- Metoclopramide**, effect of, on effects of dopamine and phenylephrine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- , effects of, in the rat vas deferens, interactions with  $\alpha$ -adrenoceptors, 113
  - , at low and high concentrations, effects of, on dopamine-mediated prolactin release from rat anterior pituitary cells, 569
- Metoprolol**, effect of, on effect of electrical field stimulation on release of tritium from guinea-pig atria incubated with adrenaline and [<sup>3</sup>H]-noradrenaline, 435
- , effect of, on effect of adrenaline on efflux of tritium from guinea-pig atria incubated with [<sup>3</sup>H]-noradrenaline, 435
- Mexiletine**, investigation of the antifibrillatory activity of some anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitors in rabbit isolated heart compared with, 635
- , evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- Microsomal mixed-function oxidases**, relative contribution of, and hepatic blood flow to the clearance of drugs in the hyperthyroid state in the dog, 143
- Miniature endplate potentials**, at the frog and mouse neuromuscular junction, effect of  $\gamma$ -aminobutyric acid on, 279
- Monoamine oxidase**, inhibition of, by furazolidone in the chicken, influence of the alimentary flora on, 219
- Monohydroxytamoxifen**, oestrogenic and anti-oestrogenic activities of, in immature rat uterine weight test, 83
- Monovalent cations**, effects of, on [<sup>3</sup>H]-clonidine binding to  $\alpha$ -adrenoceptors in membranes prepared from regions of guinea-pig kidney, 57
- Morphine**, effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
- , central cardiovascular effects of, in rats 365
  - , action of, and enkephalin analogues on brain acetylcholine release: differential reversal by naloxone and an opiate pentapeptide, 201
  - , inhibition by, of neuroeffector transmission in the vas deferens of naive and morphine-treated mice, 195
  - , inhibitory action of, on the cat carotid chemoreceptors, 297
  - , anti-diuretic effect of, and development of tolerance and physical dependence after chronic morphine treatment with, in Brattleboro rats, 51
  - , antidiuretic effect of, in Brattleboro rats: development of tolerance and physical dependence after chronic morphine treatment, 51
- Mortality**, physostigmine-induced, in mice, effect of C<sub>10</sub>Dichol on, 349
- Motor-nerve terminals**, frog and mouse, do they have  $\gamma$ -aminobutyric acid receptors?, 279
- Muscarine**, guinea-pig ileum acetylcholine receptors sensitive to, size of the hydroxyl group and its contribution to the affinity of atropine for, 31
- Muscarinic cholinceptors**, in rat brain, interaction of trazodone with, 359
- Muscarinic receptors**, in crude synaptosomal preparations from guinea-pig brain, interaction of, with amine local anaesthetics, 327
- , in rat isolated ileal segments and superior cervical ganglia, antagonist discrimination between, 362
- Muscarinic sympathetic ganglion stimulant**, McN-A-343, effect of tilting on the pressor responses to, in anaesthetized cats and dogs, 287
- [<sup>3</sup>H]-muscimol**, a potent  $\gamma$ -aminobutyric acid receptor agonist, binding of, to membranes of the bovine retina, 259
- Muscular arteries**, mammalian, neuromuscular transmission in, an electro-physiological analysis of the effects of noradrenaline and  $\alpha$ -receptor antagonists on, 651
- Myenteric plexus**, guinea-pig, preferential binding of dipyrindamole to, in ileal longitudinal muscle-myenteric plexus preparation, 235
- , of guinea-pig ileum, effects of calcium concentration on the inhibition of cholinergic neurotransmission in, by adenine nucleotides, 245
- Myocardial depression**, resulting from acute coronary artery ligation in anaesthetized greyhounds, effect of prophylactic lignocaine on, 597
- Myocardial infarction**, acute, no good evidence that lignocaine is an effective prophylactic in, in anaesthetized greyhounds, 597
- Myometrium**, rat pregnant, factors affecting prostacyclin formation by, 641
- Myotonia**, as a side-effect of diuretic action, 467

# N

**Naloxone**, effect of, on effects of enkephalin analogues on contractile responses of prostatic and epididymal por-

- tions of rat isolated vas deferens to single pulse field stimulation, 445
- , differential reversal by, and an opiate pentapeptide of actions of enkephalin analogues and morphine on brain acetylcholine release, 201
  - , effect of, on effect of normorphine on amplitude of excitatory junction potentials in smooth muscle cells of vas deferens in naive and morphine-treated mice, 195
  - , effect of, on inhibitory actions of methionine-enkephalin and morphine on the cat carotid chemoreceptors, 297
- Naphazoline**, effect of, on membrane adenosine triphosphatase activity in membranes from bovine adrenal medulla and rat submaxillary gland, 135
- Narcotic analgesics**, central cardiovascular effects of, in rats, 365
- Neomycin**, effect of suppression of the alimentary flora by, on effect of furazolidone on monamine oxidase activity in the chicken, 219
- Nerve endings**, isolated from rat brain, kinetic studies of radiocalcium uptake by, 265
- , isolated from rat brain, pharmacological studies of uptake of radiocalcium by, 273
- Nerve stimulation**, of renal nerve in the cat, effects of, on renal blood flow, glomerular filtration rate and sodium excretion, effects of angiotensin II receptor blocking drugs on, 499
- , sympathetic, noradrenaline release evoked by, in rabbit isolated kidney, effects of piritbedil and apomorphine on, 513
  - , perivascular, responses of mammalian muscular arteries to, effects of noradrenaline and  $\alpha$ -receptor antagonists on, 651
- Neuroeffector transmission**, inhibition of, by morphine in the vas deferens of naive and morphine-treated mice, 195
- Neuromuscular effects**, of oxotremorine, nicotine and physostigmine, effect of  $C_{10}$ Dichol on, 349
- Neuromuscular junctions**, frog and mouse, effect of  $\gamma$ -aminobutyric acid on miniature endplate potentials at, 279
- Neuromuscular paralysis**, induced by harmine and arecoline, effect of  $C_{10}$ Dichol on, in mice, 349
- Neuromuscular transmission**, in mammalian muscular arteries, an electrophysiological analysis of the effects of noradrenaline and  $\alpha$ -receptor antagonists on, 651
- Neuronal factors**, influence of, on rat heart adrenoceptors, 371
- Neurotransmission**, somatic and autonomic, a comparison of the effects of pancuronium bromide and its monoquaternary analogue, Org NC 45, on, in the rat, 225
- , cholinergic, effects of calcium concentration on inhibition of, in the myenteric plexus of guinea-pig ileum by adenine nucleotides, 245
- Nicotine**, inhibition by, of the formation of prostacyclin-like activity in rabbit and human vascular tissue, 609
- , hexamethonium-sensitive contractions induced by, in guinea-pig ileal longitudinal muscle-myenteric plexus preparation, effects of adenosine and adenine nucleotides on, 245
  - , effect of  $C_{10}$ Dichol on tremor induced by, in mice, 349
  - , changes in size of hydroxyl groups associated with the ionization of phenolic and carboxylic groups in, possible implications for drug-water and drug-receptor interactions, 17
- Nicotine adenine dinucleotide**, NADP and NADH, effects of, on effects of calcium concentration on the contractile response of guinea-pig ileal longitudinal muscle-myenteric plexus preparation to electrical field stimulation, 245
- Nifedipine**, effect of, on contractile response of guinea-pig vas deferens to calcium ionophore, A23187, 581
- Nitroglycerine**, actions of, on smooth muscles of the guinea-pig and rat portal veins, 489
- Non-cholinergic** excitatory neurones, evidence that cell bodies of, which supply the smooth muscle of the chicken rectum are located in the ganglia of Renak's nerve, 519
- Non-steroidal anti-oestrogens**, evidence for the metabolic activation of, a study of structure-activity relationships, 83
- Nontricyclic antidepressant**, new, trazodone, interaction of, with rat brain muscarinic cholinceptors, 359
- Noradrenaline**, effect of, on isolated longitudinal smooth muscle from chicken rectum, 479
- , release of, evoked by sympathetic nerve stimulation in rabbit isolated kidney, effects of piritbedil and apomorphine on, 513
  - , rat brain, effect of low-dose lithium administration and subsequent withdrawal on, 601
  - , stimulation with, calcium sensitivity of mesenteric resistance vessels in response to, in young and adult spontaneously hypertensive rats, 585
  - , plasma, hydralazine-induced release of, in conscious rabbit, effect of indomethacin on, 529
  - , effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
  - , sensitization of guinea-pig atria and trachea to, produced by an inhibitor of neuronal (cocaine) and extra-neuronal (metanephrine) uptake, compared to a theoretical model, 407
  - , response of ductus arteriosus from near-term guinea-pigs and lambs to, effect of transmural stimulation on, 419
  - , contractile response to, in rabbit aortic strips, effect of thrombin inhibitors (TI-189 and TI-233) on, 399
  - , response of rat isolated atria to, effect of sympathetic denervation of thyroidectomized rats by 6-hydroxydopamine on, 371
  - , an electrophysiological analysis of the effects of, on neuromuscular transmission in mammalian muscular arteries, 651
  - , pressor response to, vasorelaxant action of caroverine fumarate on, in rat hindquarter preparation and rat isolated aorta, 343
  - , pressor effects of, on effect of tilting on effect of mecamylamine on, in anaesthetized cats, 287
  - ,  $\alpha$ -adrenoceptor stimulant activity of, in rat aortic strip, rat brain synaptosome preparation and in the anaesthetized pithed rat, 5
  - , interaction between, and adenosine triphosphate in the isolated vas deferens of the guinea-pig, 93
  - , potentiation of, by prostaglandins  $E_2$  and  $F_{2\alpha}$  in rat mesenteric artery, mechanism of, 75
  - , effect of, on dog anococcygeus muscle, 35

- (-)-**Noradrenaline**, effect of, on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- , effect of, on contractile response of guinea-pig gall bladder *in vitro* to electrical field stimulation, effects of time and indomethacin on, 429
- , effect of, on anaphylactic release of histamine from human lung tissue *in vitro*, 663
- , contractions of guinea-pig gall bladder strips induced by, 185
- [ $^3\text{H}$ ]-**noradrenaline**, accumulation and overflow of  $^3\text{H}$  following incubation of the guinea-pig gall bladder with, 557
- , effect of adrenaline on efflux of tritium from guinea-pig atria incubated with, 435
- Noradrenergic pathway**, intracerebral, destruction of, effect of, on vasodilator effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- Nordihydroguaiaretic acid**, effect of, on release of aggregating and chemokinetic factors from rat and human polymorphonuclear leukocytes, 507
- Normorphine**, effect of, on amplitude of excitatory junction potentials in smooth muscle cells of vas deferens in naive and morphine-treated mice, 195
- , effect of, on excitatory junction potentials in the mouse vas deferens, effect of cyclic adenosine monophosphate on, 307
- Nortriptyline**, effect of, on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557

## O

- Oestradiol benzoate**, oestrogenic activities of tamoxifen, its derivatives and monohydroxyamoxifen compared with, in immature rat uterine weight test, 83
- Oestrogenic activity**, of tamoxifen, its derivatives and monohydroxyamoxifen in immature rat uterine weight test, 83
- Oestrogenic potency**, of bifluranol, a fluorinated bibenzyl, compared with diethylstilboestrol in rats and mice, 11
- Opiate pentapeptide**, differential reversal by, and naloxone of actions of enkephalin analogues and morphine on brain acetylcholine release, 201
- Opiate receptors**, role of, in pressor responses induced by morphine, fentanyl and [D-Ala $^2$ ]-met-enkephalinamide in rats, 365
- , naloxone-sensitive, in the cat carotid body, 297
- Opiates**, a study of the role of cyclic adenosine 3',5'-monophosphate in the depression by, and opioid peptides of excitatory junction potentials in the mouse vas deferens, 307
- Opioid peptides**, a study of the role of cyclic 3',5'-monophosphate in the depression by, and opiates of excitatory junction potentials in the mouse vas deferens, 307
- Org 6001**, evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- Org NC 45**, the monoquaternary analogue of pancuronium bromide, a comparison of the effects of, and pancuronium bromide on autonomic and somatic neurotransmission in the rat, 225

- Orthostatic hypotension**, anaesthetized cat with, effect of tilting on the pressor responses to dimethyl phenylpiperazinium iodide, 287
- Osmotic fragility**, of human erythrocytes, effects of some S-alkylthiouroniums and related compounds on, 253
- Ouabain**, release of acetylcholine from rat striatal slices evoked by, action of enkephalin on, 211
- Oxotremorine**, effect of C $_{10}$ Dichol on tremor induced by, in mice, 349
- Oxprenolol**, effect of, on effect of electrical field stimulation on release of tritium from guinea-pig atria incubated with adrenaline and [ $^3\text{H}$ ]-noradrenaline, 435
- Oxymethazoline**, effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445

## P

- Palythoa tubercurosa**, palytoxin isolated from, potent depolarizing action of, on frog isolated spinal cord, 575
- Palytoxin**, isolated from *Palythoa tubercurosa*, potent depolarizing action of, on frog isolated spinal cord, 575
- Pancuronium bromide**, a comparison of the effects of, and its monoquaternary analogue, Org NC 45, on autonomic and somatic neurotransmission in the rat, 225
- Parasympathetic transmission**, cardiac, effects of pancuronium bromide and its monoquaternary analogue, Org NC 45, on, in the rat, 225
- Peripheral vein**, human, inhibition by nicotine of the formation of prostacyclin-like activity in, 609
- Phagocytosis**, stimulates the release of a slow reacting substance in cultured mouse peritoneal macrophages, 631
- Phenobarbitone**, dogs pretreated with, study of relative contribution of hepatic drug metabolizing enzymes and hepatic blood flow to clearance of drugs in the hyperthyroid state by examining disposition kinetics of antipyrine and propranolol in, 143
- Phenolic groups**, changes in size of hydroxyl groups associated with the ionization of, in phenolic quaternary ammonium salts, nicotine and some amino acids, possible implications for drug-water and drug-receptor interactions, 17
- Phenolic quaternary ammonium salts**, changes in size of hydroxyl groups associated with the ionization of phenolic groups in, possible implications for drug-water and drug-receptor interactions, 17
- Phenoxybenzamine**, an electrophysiological analysis of effect of, on neuromuscular transmission in mammalian muscular arteries, 651
- , effect of, on effect of hypophysectomy on effect of phenylephrine on rat isolated atria, 371
- , effect of, on effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- Phenotolamine**, effect of, on effect of noradrenaline on contractions of guinea-pig isolated vas deferens due to adenosine triphosphate, 93
- , effect of, on effect of metoclopramide on contractions of rat isolated vas deferens induced by electrical field stimulation, 113
- , effect of, on effect of phenylephrine on  $^{45}\text{Ca}$  efflux from rat submaxillary gland, 135
- , effect of, on contractions induced by (-)-noradrena-

- line and (–)-adrenaline, and relaxation induced by (–)-isoprenaline in guinea-pig gall bladder strips, 185
- , effect of, on effects of dopamine and phenylephrine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
  - , effect of, on contractions of dog anococcygeus muscle induced by electrical field stimulation, 35
  - , an electrophysiological analysis of effect of, on neuromuscular transmission in mammalian muscular arteries, 651
  - , effect of, on effect of hypophysectomy on effect of phenylephrine on rat isolated atria, 371
  - , effect of, on relaxation of isolated longitudinal smooth muscle strips from chicken rectum produced by isoprenaline, adrenaline and noradrenaline, 479
  - , effect of, on contractile response of guinea-pig vas deferens to calcium ionophore, A23187, 581
  - , effect of, on effect of oxprenolol on effect of electrical field stimulation on release of tritium from guinea-pig atria incubated with adrenaline and [<sup>3</sup>H]-noradrenaline, 435
  - , effect of, on responses of ductus arteriosus from near-term guinea-pigs and lambs to noradrenaline and acetylcholine, effect of transmural stimulation on, 419
- Phenylephrine**, effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
- , contractions of rat isolated vas deferens induced by electrical field stimulation, 113
  - , effect of, on membrane adenosine triphosphatase activity in membranes from bovine adrenal medulla and rat submaxillary gland, 135
  - , aggregatory response to, induced by calcium ionophore A23187 in human blood platelets, 121
  - , effect of, on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
  - , effect of hypophysectomy on effect of, on rat isolated atria, 371
- Phenytoin**, investigation of the antifibrillatory activity of some anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitors in rabbit isolated heart compared with, 635
- Phospholipase A<sub>2</sub>**, effect of, on prostacyclin formation by rat pregnant myometrium, 641
- Photoreceptor synaptosomes**, from bovine retina, binding of [<sup>3</sup>H]-muscimol, a potent  $\gamma$ -aminobutyric acid agonist, to, 259
- Phosphodiesterase inhibitors**, effect of, on effect of cyclic adenosine monophosphate on excitatory junction potentials in the mouse vas deferens, 307
- Phrenic nerve trunk**, frog and mouse, effect of injection of  $\gamma$ -aminobutyric acid into, 279
- Physostigmine**, effect of C<sub>10</sub>Dichol on tremor induced by, in mice, 349
- Pimozide**, effect of, on effects of dopamine and phenylephrine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- Pirenzepine**, comparison of effects of, on muscarinic receptors in rat isolated ileal segments and superior cervical ganglia, 362
- Piretanide**, the diuretic, myotonia induced by, in rat isolated diaphragm, soleus and extensor digitorum longus muscles and frog isolated sartorius muscle, 467
- Piribedil**, prejunctional actions of, on the isolated kidney of the rabbit, compared with apomorphine, 513
- Pithed rat**, anaesthetized, studies on some *para*-substituted clonidine derivatives that exhibit an  $\alpha$ -adrenoceptor stimulant activity in, 5
- Pituitary cells**, rat anterior, dopamine-mediated prolactin release from, effects of chlorpromazine, haloperidol, metoclopramide and domperidone on, at low and high concentrations, 569
- Plasma**, aspartate transaminase in, effect of furazolidone on, in the chicken, 219
- Plasma membrane**, calcium translocation across, synergistic effects of hypoglycaemic sulphonylureas and antibiotic ionophores on, 315
- Plasma renin**, release of, in the anaesthetized dog, in response to systemic hypotension or intrarenal isoprenaline and prostaglandin I<sub>2</sub> infusion, effect of prazosin on, 533
- Plasma renin activity**, hydrazaline-induced, in the conscious rabbit, effect of indomethacin on, 529
- , adenosine 5'-pyrophosphate-induced, in human platelet-rich plasma, effect of incubates of rings of rabbit and human vascular tissue (containing prostacyclin-like activity) on, 609
- Platelet aggregation**, human, induced by sodium arachidonate, effect of burimamide on, 157
- Platelet microsomes**, human inhibition of thromboxane A<sub>2</sub> biosynthesis in, by burimamide, 157
- Platelets**, human and rabbit blood, interaction of selective  $\alpha$ -adrenoceptor agonists and antagonists with, 121
- , normal and Down's syndrome, a study of  $\gamma$ -aminobutyric acid uptake in, 553
- Polymorphonuclear leukocytes**, rat and human, release of chemokinetic and aggregating factors from, induced by calcium ionophore A23187, 507
- Portal veins**, guinea-pig and rat, actions of nitroglycerine on smooth muscles of, 489
- Postsynaptic  $\alpha$ - and  $\beta$ -adrenoceptors**, in the guinea-pig gall bladder, 185
- Potassium**, depolarization by, calcium sensitivity of mesenteric resistance vessels in response to, in young and adult spontaneously hypertensive rats, 585
- , contractile response to, in rat aortic strips, effect of thrombin inhibitors (TI-189 and TI-233) on, 399
  - , effect of, on uptake of radiocalcium by nerve endings isolated from rat brain, 273
  - , effect of, on uptake of radiocalcium by nerve endings isolated from rat brain, 265
  - , release of acetylcholine from rat cortical and striatal slices evoked by, action of enkephalin on, 211
- Potassium chloride**, pressor response to, vasorelaxant action of caroverine fumarate on, in rat hindquarter preparation and rat isolated aorta, 343
- , effect of, on effect of noradrenaline on contractions of guinea-pig isolated vas deferens due to adenosine triphosphate, 93
- Potassium ion**, effect of, on effect of  $\gamma$ -aminobutyric acid on miniature endplate potentials at frog and mouse neuromuscular junctions, 279
- , effect of, on effects of prostaglandins E<sub>2</sub> and F<sub>2<sub>2</sub></sub> on vasoconstrictor responses to noradrenaline and methoxamine, 75

- , excretion of, effects of  $\beta$ -endorphin and morphine on, in Brattleboro rats, 51
- , effect of, on [ $^3\text{H}$ ]-clonidine binding to  $\alpha$ -adrenoceptors in membranes prepared from regions of guinea-pig kidney, 57
- Potassium permeability**, role of, in changes in membrane potentials induced by nitroglycerine in smooth muscle cells of rat and guinea-pig portal veins, 489
- Practolol**, effect of, on effect of electrical field stimulation on release of tritium from guinea-pig atria incubated with adrenaline and [ $^3\text{H}$ ]-noradrenaline, 435
- Prazosin**, effect of, on effects of dopamine and phenylephrine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- , effect of, on pro-aggregatory response to adrenaline in human and rabbit blood platelets, 121
- , an electrophysiological analysis of effect of, on neuromuscular transmission in mammalian muscular arteries, 651
- , effect of, on canine renin release in response to systemic hypotension or intrarenal isoprenaline and prostaglandin  $\text{I}_2$  infusion, 533
- Pregnant myometrium**, rat, factors affecting prostacyclin formation by, 641
- Prejunctional  $\beta$ -adrenoceptors**, in guinea-pig atria, adrenaline activation of, 435
- Pressor responses**, to potassium chloride and noradrenaline, vasorelaxant action of caroverine fumarate on, in rat hindquarter preparation and rat isolated aorta, 343
- , induced by morphine, fentanyl and [ $\text{D-Ala}^2$ ]-Met-enkephalinamide in rats, 365
- , to McN-A-343, a muscarinic sympathetic ganglion stimulant, effect of tilting on, in anaesthetized cats and dogs, 287
- Prilocaine**, effect of, on binding of ( $-$ )-[ $^3\text{H}$ ]-quinuclidinyl benzilate to muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- Procaïnamide**, effect of, on binding of ( $-$ )-[ $^3\text{H}$ ]-quinuclidinyl benzilate to muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- , evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- Procaine**, effect of, on binding of ( $-$ )-[ $^3\text{H}$ ]-quinuclidinyl benzilate to muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- , antihæmolytic concentration of, effect of, on critical hæmolytic volume of human erythrocytes, 253
- Prolactin**, dopamine-mediated release of, from rat anterior pituitary cells, effects of chlorpromazine, haloperidol, metoclopramide and domperidone on, at low and high concentrations, 569
- Promethazine**, effect of, on dog anococcygeus muscle, 35
- Propylactin**, lignocaine as a, effect of, on early post-coronary artery occlusion in anaesthetized greyhounds, 597
- Propranolol**, effect of, on relaxation of dog anococcygeus muscle induced by electrical field stimulation, 35
- , effect of, on effect of mecamlamine on effect of tilting on the pressor responses to McN-A-343, a muscarinic sympathetic ganglion stimulant, in anaesthetized cats and dogs, 287
- , effect of atropine on effect of, on contractions induced by electrical field stimulation in guinea-pig gall bladder strips, 185
- , effect of, on effect of sympathetic denervation of thyroidectomized rats or of hypophysectomy on effect of phenylephrine on rat isolated atria, 371
- , effect of, on effect of electrical field stimulation on release of tritium from guinea-pig atria incubated with adrenaline and [ $^3\text{H}$ ]-noradrenaline, 435
- , effect of, on relaxation induced by isoprenaline in ductus arteriosus from near-term guinea-pigs and lambs, 419
- , effect of, on effect of electrical field stimulation on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557
- , evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- , effect of, on effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- , effect of, on relaxation of isolated longitudinal smooth muscle strips from chicken rectum produced by isoprenaline, adrenaline and noradrenaline, 479
- (+)-**Propranolol**, effect of ( $-$ )-isoprenaline on effect of, on contractions of rat isolated vas deferens induced by electrical field stimulation, 113
- Prostacyclin**, activity like, formation of, in human and rabbit vascular tissue, inhibition by nicotine, 609
- , factors affecting formation of, by the rat pregnant myometrium, 641
- Prostacyclin synthetase**, effect of burimamide on, in sheep seminal vesicle and dog aortic microsomes, 157
- Prostaglandin  $\text{E}_1$** , effect of, on potassium-induced uptake of radiocalcium by nerve endings isolated from rat brain, 273
- Prostaglandin  $\text{E}_2$** , effect of, on dog anococcygeus muscle, 35
- Prostaglandin  $\text{I}_2$** , factors affecting formation of, by rat pregnant myometrium, 641
- , infusion of, and intrarenal isoprenaline, effect of prazosin on canine renin release in response to, 533
- Prostaglandin  $\text{F}_{2\alpha}$** , response of human isolated bronchial and lung parenchymal strips to, 107
- Prostaglandin endoperoxide analogue**, U-44069 contractile response to, in rabbit aortic strips, inhibitory action of thrombin inhibitors (TI-189 and TI-233) on, 399
- Prostaglandin endoperoxides**, formation of thromboxane  $\text{A}_2$  from, by human platelet microsomes, effect of burimamide on, 157
- Prostaglandin synthesis inhibitors**, floctafenine and indomethacin, intracerebroventricularly, effects of, on body temperature in febrile rabbits, 525
- Prostaglandins**, contractions of rat gastric fundus muscle induced by, antagonism of, by SC19220, sodium meclofenamate, indomethacin or trimethoquinol, 169
- Prostaglandins  $\text{E}_2$  and  $\text{F}_{2\alpha}$** , contractile responses to, in rabbit aortic strips, effect of thrombin inhibitors (TI-189 and TI-233) on, 399
- , mechanism of noradrenaline potentiation by, in rat mesenteric artery, 75
- Prostanoids**, contractions of rat gastric fundus muscle induced by, antagonism of, by SC19220, sodium meclofenamate, indomethacin or trimethoquinol, 169

- Prostate**, androgen-induced stimulation of, in castrated rats, effect of bifulranol, a fluorinated bibenzyl, on, 11
- Prostatic portion**, of rat isolated vas deferens, distribution of adrenoceptors and other drug receptors in, as revealed by selective agonists and antagonists, 445
- Purine nucleosides**, effect of metoclopramide on effect of, on contractions of rat isolated vas deferens induced by electrical field stimulation, 113

## Q

- Quinidine**, effect of, on binding of  $(-)[^3\text{H}]$ -quinuclidinyl benzilate muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- , evaluation of antagonism of aconitine-induced dysrhythmias in mice as a method of detecting and assessing antidysrhythmic activity of, 615
- Quinoxaline derivative**, caroverine fumarate, vasorelaxant action of, in the rat hindquarter preparation and rat isolated aorta, 343
- $(-)[^3\text{H}]$ -quinuclidinyl benzilate, binding of, to muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, effects of amine local anaesthetics on, 327

## R

- Rectum**, chicken, evidence that cell bodies of non-cholinergic excitatory neurones which supply the smooth muscle of, are located in the ganglia of Remak's nerve, 519
- , chicken, effects of  $\alpha$ - and  $\beta$ -adrenoceptor activation on tension and membrane properties of the longitudinal smooth muscle of, 479
- Remak's nerve**, ganglia of, evidence that cell bodies of non-cholinergic excitatory neurones which supply the smooth muscle of the chicken rectum are located in, 519
- Renal nerve**, sympathetic, electrical stimulation of, noradrenaline release evoked by, in rabbit isolated kidney, effects of pibedil and apomorphine on, 513
- , stimulation of, effects of, on renal blood flow, glomerular filtration rate and sodium excretion in the cat, effects of angiotensin II receptor blocking drugs on, 499
- Renin**, release of, in the dog, in response to systemic hypotension or intrarenal isoprenaline and prostaglandin  $\text{I}_2$  infusion, 533
- , plasma, activity of, hydralazine-induced, in conscious rabbit, effect of indomethacin on, 529
- Renin-angiotensin system**, role of, in the control of vasopressin in rats, 337
- Reproductive performance**, effect of bifulranol, a fluorinated bibenzyl, on, in mice and rats, 11
- Reserpine**, effect of pretreatment with, on effects of dopamine and tyramine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- , effect of, on effects of prostaglandins  $\text{E}_2$  and  $\text{F}_{2\alpha}$  on vasoconstrictor responses to noradrenaline and methoxamine, 75

- , effect of, on contractile response of guinea-pig vas deferens to calcium ionophore, A23187, 581
- , effect of, on responses of ductus arteriosus from near-term guinea-pigs and lambs to noradrenaline and acetylcholine, effect of transmural stimulation on, 419
- , effect of, on effect of hypophysectomy on adrenoceptor response to noradrenaline in rat isolated atria, 371
- Retina**, bovine, binding of  $[^3\text{H}]$ -muscimol, a potent  $\gamma$ -aminobutyric acid receptor agonist, to membranes of, 259
- RO363**, effect of, on anaphylactic release of histamine from human lung tissue *in vitro*, 663

## S

- Salbutamol**, effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445
- , sensitization of guinea-pig atria and trachea to, produced by an inhibitor of neuronal (cocaine) and extra-neuronal (metanephine) uptake, compared to a theoretical model, 407
- $(\pm)$ -Salbutamol, effect of, on anaphylactic release of histamine from human lung tissue *in vitro*, 663
- Saphenous artery**, rabbit, an electrophysiological analysis of the effects of noradrenaline and  $\alpha$ -receptor antagonists on neuromuscular transmission in, 651
- Saralasin**, effect of, on effect of SQ 20881, the converting enzyme inhibitor, on the release of vasopressin induced by angiotensin in rats, 337
- Sartorius muscle**, frog isolated, myotonia induced by diuretics in, 467
- SC19220**, antagonism by, of prostanoid-induced contractions of rat gastric fundus muscle, 169
- Seminal vesicles**, sheep, effect of burimamide on cyclo-oxygenase and prostacyclin synthetase in, 157
- Serum**, calcium concentration in, following electroconvulsive shock or bicuculline-induced convulsions in rats, 321
- Sexual potency**, effect of bifulranol, a fluorinated bibenzyl, on, in mice and rats, 11
- Skeletal muscle**, frog, cholinergic nerve endings to, effects of adenosine and adenine nucleotides on, 191
- SKF 525A**, effect of, on binding of  $(-)[^3\text{H}]$ -quinuclidinyl benzilate to muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- Slow-reacting substance**, phagocytosis stimulates the release of, in cultured mouse peritoneal macrophages, 631
- Slow-reacting substance of anaphylaxis**, response of human isolated bronchial and lung parenchymal strips to, and other mediators of asthmatic bronchospasm, 107
- , stimulation of antigen-induced immunological release of, from guinea-pig sensitized lung by (2-isopropyl-3-indolyl)-3 pyridyl ketone (L8027) and indomethacin, 65
- , *in vitro* immunological release of, from actively sensitized guinea-pig lung fragments, effect of variation in endogenous levels of ascorbic acid on, 539
- , immunological release of, from sensitized human and guinea-pig chopped lung *in vitro*, effect of isamoxole, a new anti-allergic compound, on, 387

- Smooth muscle**, cells of, of vas deferens, amplitude of excitatory junction potentials in, effect of normorphine on, in naive and morphine-treated mice, 195
- , longitudinal, strips of, from guinea-pig isolated gastro-oesophageal junction, effects of dopamine, phenylephrine, isoprenaline and clonidine on, 177
  - , vascular, from rat isolated aorta, vasorelaxant action of caroverine fumarate, a calcium-blocking agent, on, 343
  - , evidence that cell bodies of non-cholinergic excitatory neurones which supply, of the chicken rectum are located in the ganglia of Remak's nerve, 519
  - , longitudinal, of chicken rectum, effects of  $\alpha$ - and  $\beta$ -adrenoceptor activation on tension and membrane properties of, 479
  - , of guinea-pig vas deferens, characteristic contractile response of, to calcium ionophore, A23187, 581
  - , of rat isolated vas deferens, potentiation by diazepam of effects of adenosine on responses of, to electrical field stimulation, 459
- Smooth muscles**, mammalian arterial, an electrophysiological analysis of the effects of noradrenaline and  $\alpha$ -receptor antagonists on neuromuscular transmission in, 651
- , of the guinea-pig and rat portal veins, actions of nitroglycerine on, 489
- Sodium**, excretion of, induced by stimulation of the renal nerve in the cat, effects of angiotensin II receptor blocking drugs on, 499
- , effect of, on binding of [ $^3$ H]-muscimol, a potent  $\gamma$ -aminobutyric acid receptor agonist, to membranes of the bovine retina, 259
- Sodium cyanide**, chemo-excitation evoked by, in cat carotid body, effect of Met-enkephalin on, 297
- Sodium-*n*-dipropyl acetate**, effect of, on  $\gamma$ -aminobutyric acid dependent inhibition in the rat cortex and substantia nigra in relation to its anticonvulsant activity, 545
- Sodium ion**, effect of, on  $\gamma$ -aminobutyric acid uptake in normal and Down's syndrome platelets, 553
- , effect of, on depolarizing action of palytoxin isolated from *Palythoa tubercurosa* on frog isolated spinal cord, 575
  - , effect of, on [ $^3$ H]-clonidine binding to  $\alpha$ -adrenoceptors in membranes prepared from regions of guinea-pig kidney, 57
  - , excretion of, effects of  $\beta$ -endorphin and morphine on, Brattleboro rats, 51
  - , effect of ervatamine on equilibrium potential for, in frog atrial fibres, 41
- Sodium laurylsulphate**, effect of, on binding of [ $^3$ H]-muscimol, a potent  $\gamma$ -aminobutyric acid agonist, to membranes of the bovine retina, 259
- Sodium permeability**, role of, in changes in membrane potentials induced by nitroglycerine in smooth muscle cells of rat and guinea-pig portal veins, 489
- Sodium valproate**, an anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitor, antifibrillatory activity of, in rabbit isolated heart, compared with phenytoin and mexiletine, 635
- Soleus muscle**, rat isolated, myotonia induced by diuretics in, 467
- Somatic neurotransmission**, a comparison of effects of pancuronium bromide and its monoquaternary analogue, Org NC 45, on, and autonomic neurotransmission in the rat, 225
- Spermatogenesis**, effect of bifluranol, a fluorinated bibenzyl, in mice and rats, 11
- Spinal cord**, frog isolated, potent depolarizing action of palytoxin isolated from *Palythoa tubercurosa* on, 575
- Spiroperidol**, effect of, on effects of dopamine and phenylephrine on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177
- SQ2006**, effect of, on effect of cyclic adenosine monophosphate on excitatory junction potentials in the mouse vas deferens, 307
- SQ20881**, converting enzyme inhibitor, effect of, on the release of vasopressin induced by angiotensin in rats, 337
- SQ22536**, adenylate cyclase inhibitor, effects of, on aggregatory response to adrenaline and clonidine, and on effect of A23187, in human and rabbit blood platelets, 121
- Stercuronium**, comparison of effects of, on muscarinic receptors in rat isolated ileal segments and superior cervical ganglia, 362
- Steroid hormones**, role of, in sensitivity of cardiac adrenoceptors in altered thyroid states in rats, 371
- Stomach longitudinal muscle**, rat, contractions of, induced by prostanooids, antagonism of, by SC19220, sodium meclofenamate, indomethacin or trimethoquinol, 169
- Striatal slices**, rat, investigation of action of enkephalin on the spontaneous and evoked release of acetylcholine from, 211
- Striatum**, rat, nerve endings isolated from, pharmacological studies of uptake of radiocalcium by, 273
- Submaxillary gland**, rat, membranes from, effects of  $\alpha$ -adrenoceptor agonists on membrane adenosine triphosphatase activity in, 135
- Substance P**, increases hypothalamic blood flow in conscious rabbits via an indirect adrenergic-cholinergic interaction, 623
- Substantia nigra**, rat, effect of sodium-*n*-dipropyl acetate on  $\gamma$ -aminobutyric acid dependent inhibition in, in relation to its anticonvulsant activity, 545
- Sulphonylureas**, hypoglycaemic, synergistic effects of, and antibiotic ionophores upon calcium translocation across the plasma membrane, 315
- Superior cervical ganglia**, rat isolated, antagonist discrimination between muscarinic receptors in, and in rat isolated ileal segments, 362
- Sympathetic denervation**, effect of, on effect of phenylephrine on  $^{45}$ calcium efflux from rat submaxillary gland, 135
- , of thyroidectomized rats by 6-hydroxydopamine, effects of, on responses of rat isolated atria to noradrenaline, isoprenaline and propranolol, 371
- Sympathetic ganglion stimulant**, muscarinic, McN-A-343, effect of tilting on the pressor responses to, in anaesthetized cats and dogs, 287
- Sympathetic nerve stimulation**, noradrenaline release evoked by, in rabbit isolated kidney, effects of piritbedil and apomorphine on, 513
- Sympathetic nervous system**, role of, in pressor responses induced by morphine, fentanyl and [ $D$ -Ala $^2$ ]-Met-enkephalinamide in rats, 365
- Sympathetic renal nerve**, electrical stimulation of, nor-

- adrenaline release evoked by, in rabbit isolated kidney, effects of pibedil and apomorphine on, 513
- Sympathetic transmission**, cardiac, effects of pancuronium bromide and its monoquaternary analogue, Org NC 45, on, in the rat, 225
- Sympathectomy**, chemical, of hypothalamus with 6-hydroxydopamine, effect of, on effect of substance P on hypothalamic blood flow in conscious rabbits, 623
- Synaptosomal preparations**, crude, from guinea-pig brain, interaction of amine local anaesthetics with muscarinic receptors in, 327
- Synaptosome preparation**, rat brain, studies on some *para*-substituted clonidine derivatives that exhibit an  $\alpha$ -adrenoceptor stimulant activity in, 5
- Synaptosomes**, rat striatal, pharmacological studies of uptake of radiocalcium by, 273
- , photoreceptor, from bovine retina, binding of [ $^3\text{H}$ ]-muscimol, a potent  $\gamma$ -aminobutyric acid agonist, to, 259
- , rat brain, kinetic studies of uptake of radiocalcium by, 265
- Systemic hypotension**, effect of prazosin on canine renin release in response to, 533
- T**
- Tachycardia**, hydralazine-induced, in the conscious rabbit, effect of indomethacin on, 529
- , induced by morphine, fentanyl and [D-Ala $^2$ ]-met-enkephalin amide in rats, 365
- Tachyphylaxis**, to adenosine triphosphate, effect of noradrenaline on, in guinea-pig isolated *vas deferens*, 93
- Tail artery**, rat, an electrophysiological analysis of the effects of noradrenaline and  $\alpha$ -receptor antagonists on neuromuscular transmission in, 651
- Tamoxifen**, and its derivatives, oestrogenic and anti-oestrogenic activities of, in immature rat uterine weight test, 83
- Temperature**, body, effects of intracerebroventricular floctafenine and indomethacin on, in febrile rabbits, 525
- Tension**, effect of  $\alpha$ - and  $\beta$ -adrenoceptor activation on, of the longitudinal smooth muscle of the chicken rectum, 479
- Tetracaine**, effect of, on effect of citric acid aerosol on breathing in the guinea-pig, 165
- , effect of, on binding of (—)-[ $^3\text{H}$ ]-quinuclidinyl benzilate to muscarinic receptors in crude synaptosomal preparations from guinea-pig brain, 327
- Tetrodotoxin**, effect of, on uptake of radiocalcium by nerve endings isolated from rat brain, 265
- , effect of, on depolarizing action of palytoxin isolated from *Palythoa tuberculosa* on frog isolated spinal cord, 575
- , effect of, on contractile response of guinea-pig *vas deferens* to calcium ionophore, A23187, 581
- Theophylline**, effect of, on inhibition of cholinergic transmission in the myenteric plexus of the guinea-pig ileum by adenine nucleotides, 245
- , effect of, on effect of incubates of rings of rabbit and human vascular tissue (containing prostacyclin-like activity) on platelet aggregation in human platelet-rich plasma, 609
- Thrombin inhibitors**, inhibitory action of, on the contractile responses to 5-hydroxytryptamine and prostaglandin endoperoxide analogue (U-44069) in rabbit aortic strips, 399
- Thromboxane A $_2$** , biosynthesis of, inhibition of, in human platelets by burimamide, 157
- Thromboxane B $_2$** , contractions of rat gastric fundus muscle induced by, antagonism of, by SC19220, sodium meclofenamate, indomethacin or trimethoquinol, 169
- Thromboxane synthetase inhibitors**, potency of imidazole and burimamide as, in human platelet microsomes, 157
- Thyroid-fed dogs**, study of relative contribution of hepatic drug-metabolizing enzymes and hepatic blood flow to clearance of drugs in the hyperthyroid state by examining disposition kinetics of antipyrine and propranolol in, 143
- Thyroid hormone**, excess of, effect of, on disposition kinetics of antipyrine and propranolol, and on catecholamine hypersensitivity in the dog, 143
- Thyroidectomy**, effect of thyroxine and cortisone on adrenoceptor responses of rat isolated atria to, 371
- Thyrotropin**, role of, in sensitivity of cardiac adrenoceptors in altered thyroid states in rats, 371
- Thyroxine**, effect of, on effect of thyroidectomy on adrenoceptor response of rat isolated atria to, 371
- TI-189**, inhibitory action of, on the contractile responses to 5-hydroxytryptamine and prostaglandin endoperoxide analogue (U-44069) in rabbit aortic strips, 399
- TI-233**, inhibitory action of, on the contractile responses to 5-hydroxytryptamine and prostaglandin endoperoxide analogue (U-44069) in rabbit aortic strips, 399
- Tilting**, effect of, on the pressor responses to McN-A-343, a muscarinic sympathetic ganglion stimulant, in anaesthetized cats and dogs, 287
- Time**, effects of, and indomethacin on contractile responses of the guinea-pig gall bladder *in vitro*, 429
- Tolbutamide**, a hypoglycaemic sulphonylurea, effects of antibiotic ionophores on effect of, on calcium translocation across the plasma membrane, 315
- Trachea**, guinea-pig, sensitization of, to noradrenaline, isoprenaline and salbutamol produced by an inhibitor of neuronal (cocaine) and extraneuronal (metanephrine) uptake, compared to a theoretical model, 407
- , guinea-pig, stimulation of the antigen-induced contraction of, and immunological release of histamine and slow reacting substance of anaphylaxis from sensitized guinea-pig lung by (2-isopropyl-3-indolyl)-3 pyridyl acetone (L8027) and indomethacin, 65
- Transmural stimulation**, response of ductus arteriosus from near term guinea-pigs and lambs to, 419
- Tranlycypromine**, effect of, on prostacyclin formation by rat pregnant myometrium, 641
- Trazodone**, interaction of, with rat brain muscarinic cholinergic receptors, 359
- Tremor**, induced by oxotremorine, nicotine, physostigmine, harmine and arecoline in mice, effect of C $_{10}$ Dichol on, 349
- Tricyclic antidepressants**, muscarinic receptor binding of trazodone compared with, in rat brain, 359

**Trimethoquinol**, antagonism by, of prostanoid-induced contractions of rat gastric fundus muscle, 169

**Tryptophan**, rat midbrain, effect of low-dose lithium administration and subsequent withdrawal on, 601

**Tryptophan hydroxylase**, activity of, in rat midbrain, effect of low-dose lithium administration and subsequent withdrawal on, 601

**Tyramine**, effect of adrenoceptor antagonists on effect of, on longitudinal smooth muscle strips of guinea-pig isolated gastro-oesophageal junction, 177

—, pressor effects of, on effect of tilting on effect of mecamylamine on, in anaesthetized cats, 287

—, effect of, on dog anococcygeus muscle, 35

—, effect of, on accumulation and overflow of  $^3\text{H}$  following incubation of guinea-pig gall bladder with [ $^3\text{H}$ ]-noradrenaline, 557

**Tyrosine**, rat striatal, effect of low-dose lithium administration and subsequent withdrawal on, 601

**Tyrosine hydroxylase**, activity of, in rat striatum, effect of low-dose lithium administration and subsequent withdrawal on, 601

## U

**U-44069**, prostaglandin endoperoxide analogue, contractile response to, in rabbit aortic strips, inhibitory action of thrombin inhibitors (TI-189 and TI-233) on, 399

**UK14304**, clonidine analogue, aggregatory and pro-aggregatory response induced by, in human and rabbit blood platelets, effects of  $\alpha$ -adrenoceptor agonists and antagonists on, 121

**Urine outflow**, effects of  $\beta$ -endorphin and morphine on, in Brattleboro rats, 51

**Uterine weight test**, immature rat, oestrogenic and anti-oestrogenic activities of tamoxifen, its derivatives and monohydroxytamoxifen in, 83

## V

**Vagal section**, bilateral, effect of, on bronchoconstriction induced by citric acid aerosol in the anaesthetized guinea-pig, 165

**Valproate**, sodium, anticonvulsant property of, on electroshock-induced convulsions in rats and on single unit activity in rat brain, 545

—, sodium, an anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitor, antifibrillatory activity of, in rabbit isolated heart, compared with phenytoin and mexiletine, 635

**Vas deferens**, rat, effects of pancuronium bromide on adrenergic nerve stimulation in, *in vivo* and *in vitro*, 225

—, mouse, excitatory junction potentials in, a study of the role of cyclic 3',5'-monophosphate in the depression of, by opiates and opioid peptides, 307

—, rat, effects of metoclopramide and isoprenaline in, interactions with  $\alpha$ -adrenoceptors, 113

—, guinea-pig isolated, interaction between adenosine triphosphate and noradrenaline in, 93

—, guinea-pig, characteristic contractile response to calcium ionophore, A23187, in, 581

—, rat, distribution of adrenoceptors and other drug receptors between the two ends of, as revealed by selective agonists and antagonists, 445

—, rat isolated, responses of, to electrical field stimulation, effect of diazepam on effects of adenosine and 2-chloroadenosine on, 459

**Vascular smooth muscle**, in rat isolated aorta, vasorelaxant action of caroverine fumarate, a calcium-blocking agent, on, 343

**Vascular strips**, rabbit isolated, inhibitory action of thrombin inhibitors (TI-189 and TI-233) on the contractile responses to 5-hydroxytryptamine and prostaglandin endoperoxide analogue (U-44069) in, 399

**Vascular tissue**, human and rabbit, inhibition by nicotine of the formation of prostacyclin-like activity in, 609

**Vasoconstrictor responses**, to noradrenaline and methoxamine in isolated mesenteric arteries of the rat, effects of prostaglandins  $\text{E}_2$  and  $\text{F}_{2\alpha}$  on, 75

**Vasodilator effect**, of substance P on hypothalamic blood flow in conscious rabbits, 623

**Vasopressin**, effect of, on dog anococcygeus muscle, 35

—, influence of converting enzyme inhibition on the release of vasopressin induced by angiotensin in rats, 337

**Vasorelaxant action**, of caroverine fumarate (a quinoxaline derivative), a calcium-blocking agent, in the rat hindquarter preparation and rat isolated aorta, 343

**Ventricular ectopic beats**, resulting from acute coronary artery ligation in anaesthetized greyhounds, effect of prophylactic lignocaine on, 597

**Ventricular fibrillation**, effect of prophylactic lignocaine on, in anaesthetized greyhounds, 597

—, activity of some anticonvulsant  $\gamma$ -aminobutyric acid transaminase inhibitors against, in rabbit isolated heart, compared with phenytoin and mexiletine, 635

**Verapamil**, effect of, on pressor responses to potassium chloride and noradrenaline in rat hindquarter preparation and rat isolated aorta, 343

—, effect of, on contractile response of guinea-pig vas deferens to calcium ionophore, A23187, 581

**Veratridine**, release of acetylcholine from rat cortical and striatal slices evoked by, action of enkephalin on, 211

**Veratrine**, effect of  $\gamma$ -aminobutyric acid on miniature endplate potentials induced by, at frog and mouse neuromuscular junctions, 279

**$\gamma$ -Vinyl  $\gamma$ -aminobutyric acid**, an anti-convulsant  $\gamma$ -aminobutyric acid transaminase inhibitor, anti-fibrillatory activity of, in rabbit isolated heart, compared with phenytoin and mexiletine, 635

## W

**[ $^3\text{H}$ ]-WB-4101**, binding of, in rat isolated atria, effect of hypophysectomy on, 371

## X

**X537A**, calcium ionophore, effect of, on effects of hypoglycaemic sulphonyl-ureas on calcium translocation across the plasma membrane, 315

**Xylazine**, effect of, on contractile responses of prostatic and epididymal portions of rat isolated vas deferens to single pulse field stimulation, 445

**Y**

**Yohimbine**, effect of, on pro-aggregatory response to adrenaline in human and rabbit blood platelets, 121

**Z**

**Zymosan particles**, phagocytosis of, release of a slow reacting substance stimulated by, in cultured mouse peritoneal macrophages, 631