

Edited for the British Pharmacological Society by

W. D. M. Paton (*Chairman*) H. M. Adam (*Secretary*)
Margaret Day (*Press Editor*)
J. D. Stephenson (*Assistant Press Editor*)

R. B. Barlow	J. Maddox (co-opted)
J. M. Barnes	J. F. Mitchell
J. W. Black	P. A. Nasmyth
W. C. Bowman	M. W. Parkes
P. B. Bradley	Mary Pickford
A. W. Cuthbert	H. P. Rang
C. T. Dollery	H. O. Schild
W. S. Feldberg	D. F. Sharman
D. F. Hawkins	A. P. Silverman
F. Hobbiger	M. A. Simmonds
Margarethe Holzbauer	A. D. Smith (co-opted)
D. B. Hope	F. M. Sullivan
H. W. Kosterlitz	A. Ungar
G. P. Lewis	J. R. Vane

Editorial assistance is provided by the staff of Nature

Papers will be considered for publication on all aspects of drug action, including chemotherapy.

Manuscripts (two copies) should be sent to Dr. H. M. Adam, Department of Pharmacology, University of Edinburgh Medical School, 1 George Square, Edinburgh EH8 9JZ. Authors should consult the suggestions inside the back cover.

Subscriptions. Three volumes of the journal are published annually, each volume containing four numbers. The annual subscription rate is £26.50 in the United Kingdom and the rest of the world; £32.00 U.S.A. and Canada. Subscriptions should be sent to: Subscriptions Department, Macmillan Journals Ltd., Brunel Road, Basingstoke, Hampshire, England. Alternatively, the journal can be ordered through a subscription agent or bookseller.

Advertisements: Applications for advertising space and rates should be sent to: Advertisement Department, *British Journal of Pharmacology*, Macmillan Journals Ltd., 4 Little Essex Street, London, WC2R 3LF, England. Tel: 01-836 6633.

Copyright © 1973 by the *British Journal of Pharmacology*. All rights of reproduction are reserved in respect of all papers, articles, illustrations, etc., published in this journal in all countries of the world.

INDEX TO VOLUME 49

AUTHOR INDEX

A

- ABBS, E. T. and PYCOCK, C. J. The effects of bretylium on the subcellular distribution of noradrenaline and on adrenergic nerve function in rat heart, 11
- ADAM, K. R., PULLMAN, L. G. and SCHOLFIELD, P. C. Isoprenaline- and exercise-induced tachycardia in the assessment of β -adrenoceptor blocking drugs; a comparison between tolamolol, practolol, and propranolol, 560
- AL-BAKER, A. *See* AL-HACHIM, G. M., 311
- AL-HACHIM, G. M. and AL-BAKER, A. Effects of chlordane on conditioned avoidance response, brain seizure threshold and open-field performance of prenatally-treated mice, 311
- ANDERSON, CAROLINE and STONE, T. W. (introduced by MALCOLM, J. L.). The effects of clonidine on single cortical and medullary neurones, 176P
- ANDREWS, W. H. H. and ORBACH, J. A study of compounds which initiate and block nerve impulses in the perfused rabbit liver, 192
- ASHCROFT, G. W. *See* LASZLO, I., 179P
- ASTON, R. Mechanisms contributing to barbiturate intolerance in rats, 527

B

- BACH, CATHERINE and LEWIS, G. P. Skin and muscle lymph from the rabbit hind limb, 160P
- BALLANTYNE, B., GAZZARD, M. F. and SWANSTON, D. W. Eye damage caused by crystal violet, 181P
- BARLOW, R. B. The prediction of drug activity, 178P
- BARLOW, R. B. and FRANKS, FIONA M. A comparison of phenylalkyl- and phenoxyalkyl-trimethylammonium and triethylammonium salts; their apparent molal volumes at infinite dilution and effects on the frog rectus and guinea-pig ileum preparations, 480
- BARRETT, A. M., DOLLOMORE, P. G. and EINSTEIN, R. The relationship between ethyl oleate/Krebs solution partition coefficient and depression of myocardial contractile force in a number of pharmacologically active compounds (T), 178P
- BECK, FRANCES J., LEVY, L. and WHITEHOUSE, M. W. The local graft versus host reaction in the rat as a tool for drug mechanism studies, 293
- BELL, C. Oestrogen-induced sensitization of the uterine artery of the guinea-pig to acetylcholine, 595
- BERGNER, P-E. E., BERNIKER, K., COOPER, T. B., GRADJAN, J. R. and SIMPSON, G. M. Lithium kinetics in man; effect of variation in dosage pattern, 328
- BERNIKER, K. *See* BERGNER, P-E. E., 328
- BERTACCINI, G., ERSPAMER, V. and IMPICCIATORE, M. The actions of bombesin on gastric secretion of the dog and the rat, 437

- BEVAN, P., BRADSHAW, C. M., ROBERTS, M. H. T. and SZABADI, E. The dual action of tricyclic antidepressant drugs on responses of single cortical neurones to acetylcholine, 173P
- BHOOLA, K. D. and EDJTEHADI, M. Biosynthesis of noradrenaline in organ cultured hearts, 131
- BISCOE, T. J., DUGGAN, A. W., HEADLEY, P. M. and LODGE, D. Rhythmical field potentials induced in the Inferior Olive Complex by iontophoretically applied harmaline and other unrelated alkaloids, 174P
- BLAKELEY, A. G. H. *See* NICOL, C., 184P
- BLAKELEY, A. G. H., POWIS, G. and SUMMERS, R. J. An isolated, innervated, blood perfused cat heart preparation (T), 188P
- BLOCK, A. J. and REIT, E. The influence of histamine and other vasoactive substances on contractile responses of cat skeletal muscle to acetylcholine, 74
- BLYTH, D. I. Some effects of histamine in the depolarized rat uterus, 445
- BOAKES, R. J., BRADLEY, P. B. and CANDY, J. M. Antagonism of the effects of iontophoretically applied (+)-amphetamines by chlorpromazine on single neurones, 175P
- BONTA, I. L. and HALL, D. W. R. (introduced by MAXWELL, D. R.). Potentiation of the biphasic bradykinin response of the guinea-pig ileum, 161P
- BOOBIS, A. and POWIS, G. The isolated perfused rat liver in the study of the metabolism of foreign compounds, 185P
- BOSE, D. and INNES, I. R. The role of sodium pump in the inhibition of smooth muscle responsiveness to agonists during potassium restoration, 466
- BOUSQUET, P. and GUERTZENSTEIN, P. G. Localization of the central cardiovascular action of clonidine, 573
- BOYLE, F. C. Microphotometric and micro-spectrographic identification of tissue components, 188P
- BRADLEY, P. B. *See* BOAKES, R. J., 175P
- BRADSHAW, C. M., ROBERTS, M. H. T. and SZABADI, E. Kinetics of the release of noradrenaline from micropipettes; interaction between ejecting and retaining currents, 667
- BRADSHAW, P. *See* BEVAN, P., 173P
- BRANCH, R. A., NIES, A. S., SHAND, D. G. (introduced by MITCHELL, J. F.). The influence of glucagon on regional blood flow in the rhesus monkey, 149P
- BREZENOFF, H. E. The role of brain acetylcholine in the pressor response to centrally injected neostigmine, 557
- BREZENOFF, H. E. Cardiovascular responses to noradrenaline in the rat before and after administration of various anaesthetics, 565
- BRIANT, R. H., DOLLERY, C. T., FENYVESI, T. and GEORGE, C. F. Assessment of selective β -adrenoceptor blockade in man, 106
- BRITTAIN, R. T., KELLET, D. N., NEAT, M. L. and STABLES, R. Anti-nociceptive effects in N-substituted cyclohexylmethylbenzamides, 158P

C

- CACCIA, S., CECCHETTI, G., GARATTINI, S. and JORI, A. Interaction of (+)-amphetamine with cerebral dopaminergic neurones in two strains of mice, that show different temperature responses to this drug, 400
- CAMPBELL, I. C., and TODRICK, A. On the pharmacology and biochemistry of the amine-uptake mechanism in human blood platelets, 279
- CANDY, J. M. *See* BOALES, R. J., 175P
- CECCHETTI, G. *See* CACCIA, S., 400
- CHENG, C. P. K., CHENG, K. K. and WANG, J. C. C. Adrenaline-induced acute massive pulmonary oedema in the dog, 727
- CHENG, K. K. *See* CHENG, C. P. K., 727
- CHESHER, G. B., EVERINGHAM, M., JACKSON, D. M., MARCHANT-WILLIAMS, H. and STARMER, G. A. The effect of cannabinoids on intestinal motility and their antinociceptive effect in mice, 588
- ČIHÁK, A. and VAPTAROVA, K. Decreased synthesis of DNA in regenerating rat liver after the administration of reserpine, 253
- CLARK, D. G. and TINSTON, D. J. Correlation of the cardiac sensitizing potential of halogenated hydrocarbons with their physico-chemical properties, 355
- COOLING, M. and DAY, M. D. Drinking in the cat induced by centrally administered angiotensin, 150P
- COOPER, T. B. *See* Bergner, P-E. E., 328
- COSTALL, B. and NAYLOR, R. J. The role of the substantia nigra in the locomotor stimulant action of amphetamine, 29
- COTTRELL, G. A. *See* OSBORNE, N. N., 170P
- COX, B. M., GINSBERG, M. and WILLIS, JULIA. The offset of morphine tolerance in rats and mice, 159P
- CREED, K. E. and GILLESPIE, J. S. Measurement of electrical properties of the smooth muscle cell membrane of the rat anococcygeus (T), 188P
- CROOKS, J., HEDLEY, A. J., MACNEE, C. and STEVENSON, I. H. Changes in drug metabolizing ability in thyroid disease, 156P
- CROSSMAN, A. R., WALKER, R. J. and WOODRUFF, G. N. Picrotoxin antagonism of γ -aminobutyric acid inhibitory responses and synaptic inhibition in the rat substantia nigra, 696
- CROW, T. J. and GROVE-WHITE, I. G. An analysis of the learning deficit following hyoscine administration to man, 322
- CUTHBERT, A. W. and PIC, P. Adrenoceptors and adenylyl cyclase in gills, 134
- CUTHBERT, A. W. and YOUNG, J. M. The number of muscarinic receptors in chick amnion muscle, 498
- DHAWAN, B. N. and SRIMAL, R. C. Anti-inflammatory and some other pharmacological effects of 3,4-*trans*-2,2-dimethyl-3-phenyl-4-[*p*-(β -pyrrolidinoethoxy)-phenyl]-7-methoxy-chroman (Centchroman), 64
- DHUMAL, V. R. and GULATI, O. D. Effect on body temperature of perfusion of cerebral ventricles with artificial C.S.F. deficient in calcium or containing excess of sodium or calcium, 699
- DOLLERY, C. T. *See* Briant, R. H., 106
- DOLLOMORE, P. G. *See* BARRETT, A. M., 178P
- DOW, R. C., LASZLO, I. and RITCHIE, ISOBEL. Cellular localization of the uptake of 5-hydroxytryptamine in the area postrema of the rabbit after injection into a lateral ventricle, 580
- DRYDEN, W. F., HARVEY, A. L. and HAMILTON, B. Developing skeletal muscle fibres in tissue culture as a test system for the measurement of drug effects, 188P
- DUGGAN, A. W. *See* Biscoe, T. J., 174P
- DURNIN, J. V. G. A. and WOMERSLEY, J. The metabolic effects, and the composition of the tissue lost, in weight reduction by obese patients on treatment with fenfluramine, 115

E

- ECCLES, R. and WILSON, H. A kallikrein-like substance in cat nasal secretion, 711
- EDJTEHADI, M. *See* BHOOLA, K. D., 131
- EINSTEIN, R. *See* DOLLOMORE, P. G., 178P
- EISEN, V., FREEMAN, PATRICIA C., LOVEDAY, C. and WEST, G. B. Blood changes in experimental arthritis in two types of genetically different rats, 685
- EISEN, V. and LOVEDAY, C. Effects of suramin on complement, blood clotting, fibrinolysis and kinin formation, 678
- ENERO, MARIA A. and LANGER, S. Z. Influence of reserpine-induced depletion of nor-adrenaline on the negative feedback mechanism for transmitter release during nerve stimulation, 214
- ENGLERT, L. F., HO, B. T. and TAYLOR, DOROTHY. The effects of (-)- Δ^9 -tetrahydrocannabinol on reserpine-induced hypothermia in rats, 243
- ENGLISH, P. D., MORGAN, B., POYSER, R. H. and WHITING, R. L. Changes in serum and tissue lipid levels induced by metacorticoid hypertension in rats, 147P
- ERSPAMER, V. *See* BERTACCINI, G., 437
- EVANS, MARION E., PATERSON, J. W. and SHENFIELD, GILLIAN M. A technique for studying drug absorption from the lung in man, 153P
- EVANS, MARION E., PATERSON, J. W., SHENFIELD, GILLIAN M., THOMAS, N. and WALKER, S. R. The pharmacokinetics of rimeterol in asthmatic patients, 153P
- EVANS, M. H. and JAGGARD, PAMELA J. Some effects of dimethyl sulphoxide (DMSO) on the frog neuromuscular junction, 651
- EVANS, R. H. Some characteristics of calcium accumulation at motor endplates of mouse diaphragm, 168P
- EVERINGHAM, M. *See* CHESHER, G. B., 588
- EYRE, P. and WELLS, P. W. Histamine H₂-receptors modulate systemic anaphylaxis: a dual cardiovascular action of histamine in calves, 364

D

- DATYNER, M. E. and GAGE, P. W. Presynaptic and postsynaptic effects of the venom of the Australian tiger snake at the neuromuscular junction, 340
- DAVIES, J. A. and REDFERN, P. H. The effects of hallucinogenic drugs on maze exploration in the rat over a 24 hour period, 121
- DAVISON, PAMELA and WILLIS, A. L. Examination of the concept that sodium salicylate acts via an active metabolite (T), 188P
- DAY, M. D. *See* COOLING, M., 150P

F

- FANTOZZI, R., MANNAIONI, P. F. and MORONI, F. The inhibition of histamine uptake and metabolism by burimamide in the guinea-pig atrium and in mouse neoplastic mast cells *in vitro*, 361
- FASTIER, F. N., PURVES, R. D. and TAYLOR, K. M. Observations on 'fade': a complication of the contractile response of smooth muscle to a large dose of an agonist, 490
- FENIUK, W. and LARGE, B. J. Some actions of bradykinin on mouse isolated ileum, 144P
- FENYVESI, T. *See* BRIANT, R. H., 106
- FERGUSON, D. R. and TWITE, B. R. Inhibition by diuretics of cyclic 3',5'-AMP-dependent protein kinase from toad bladder epithelium 288
- FERREIRA, S. H., MONCADA, S. and VANE, J. R. Prostaglandins and the mechanism of analgesia produced by aspirin like drugs, 86
- FERREIRA, S. H., NG, K. K. and VANE, J. R. The continuous bioassay of the release and disappearance of histamine in the circulation, 543
- FILE, SANDRA E. Effects of chlorpromazine on exploration and habituation in the rat, 303
- FORSLING, MARY L., KIRBY, MARILYN J. and SIMPSON, P. J. Possible mechanism of action for the influence of ketamine on uterine tone, 152P
- FOZARD, J. R., KELLY, M. J. and SMALL, R. C. Chemical sympathectomy of the rabbit with 6-hydroxydopamine, 182P
- FRANKS, FIONA M. *See* BARLOW, R. B., 480
- FREEMAN, PATRICIA C. *See* EISEN, V., 685
- FURMAN, B. L. and TAYO, F. M. Inhibitory effect of propranolol on insulin secretion, 145P

G

- GAGE, P. W. *See* DATYNER, M. E., 340
- GARATTINI, S. *See* CACCIA, S., 400
- GARLAND, L. G. Effect of cromoglycate on anaphylactic histamine release from rat peritoneal mast cells, 128
- GAZZARD, M. F. *See* BALLANTYNE, B., 181P
- GEORGE, C. F. *See* BRIANT, R. H., 106
- GHANI, M. F., HOPKINS, R. M., SMITH, J. R. and VANDERPE, D. R. Effects of a new tetrahydroisoquinoline (NC-7197) in experimental cardiogenic shock, 554
- GHOSH, M. N. and PARVATHY, S. Tolerance pattern of the anorexigenic action of amphetamine in rats, 658
- GIBSON, A. and POLLOCK, D. Drug-induced changes in the sensitivity of the rat anococcygeus muscle, 165P
- GIBSON, A. and POLLOCK, D. The effects of drugs on the sensitivity of the rat anococcygeus muscle to agonists, 506
- GIBSON, A. and POLLOCK, D. The absence of cocaine- and 6-hydroxydopamine-induced supersensitivity to oxymetazoline in the rat anococcygeus muscle, 725
- GILBERT, J. C., HUTCHINSON, M. and KOSTERLITZ, H. W. The effect of electrical stimulation of the myenteric plexus-longitudinal muscle preparation of the guinea-pig ileum on its acetylcholine content, 166P
- GILLESPIE, J. S. *See* CREED, K. E., 188P
- GILLESPIE, J. S. *See* GOLDBERG, A., 178P
- GILLESPIE, J. S., McCAFFERY, H. and McGRATH, J. C. The rat anococcygeus muscle preparation *in vitro* and *in vivo*, 188P
- GINSBERG, M. *See* COX, B. M., 159P
- GLICK, S. D. and GREENSTEIN, S. Possible modulating influence of frontal cortex on nigrostriatal function, 316
- GOADBY, P. and PHILLIPS, ELIZABETH A. Some effects of burimamide on the isolated perfused pulmonary circulation of the guinea-pig, 368
- GODFRAIND, T., KABA, A. and ROJAS, R. Inhibition by cinnarizine of calcium channels opening in depolarized smooth muscle, 164P
- GOLDBERG, A. and MCGILLION, F. B. (introduced by GILLESPIE, J. S.). Central uptake and cardiovascular effects of δ -aminolaevulinic acid, 178P
- GRADJIAN, J. R. *See* BERGNER, P-E. E., 328
- GRAHAM, J. D. P. and LI, D. M. F. Cardiovascular and respiratory effects of cannabis in cat and rat, 1
- GRAHAM, B. R., LITTLEJOHNS, D. W., PRICHARD, B. N. C., SCALES, B. and SOUTHOORN, P. Preliminary observations on the human pharmacology of ICI 66082 in normal volunteers, 154P
- GREENSTEIN, S. *See* GLICK, S. D., 316
- GROVE-WHITE, I. G. *See* CROW, T. J., 322
- GUERTZENSTEIN, P. G. *See* BOUSQUET, P., 573
- GULATI, O. D. *See* DHUMAL, V. R., 699

H

- HALL, D. W. R. *See* BONTA, I. L., 161P
- HAMILTON, B. *See* DRYDEN, W. F., 188P
- HARANATH, P. S. R. K. and SHYAMALAKUMARI, S. Sleep induced by small doses of tubocurarine injected into cerebral ventricle of dog, 23
- HARVEY, A. L. *See* DRYDEN, W. F., 188P
- HARVEY, S. C. and RANG, H. P. Unchanged responses to local anaesthetics and quinidine in the denervated diaphragm, 169P
- HEADLEY, P. M. *See* BISCOE, T. J., 174P
- HEDLEY, A. J. *See* CROOKS, J., 156P
- HILL, R. G., SIMMONDS, M. A. and STRAUGHAN, D. W. A comparative study of some convulsant substances as γ -aminobutyric acid antagonists in the feline cerebral cortex, 37
- HO, B. T. *See* ENGLERT, L. F., 243
- HOLMES, J. C. and SCHNEIDER, F. H. Pentobarbitone inhibition of catecholamine secretion, 205
- HOPKINS, R. M. *See* GHANI, M. F., 554
- HORTON, E. W. and POYSER, N. L. Elongation of oestrous cycle in the guinea-pig following subcutaneous or intra-uterine administration of indomethacin, 98
- HORTON, R. W. and MELDRUM, B. S. Seizures induced by allylglycine, 3-mercaptopropionic acid and 4-deoxypyridoxin in mice and photosensitive baboons, and different modes of inhibition of cerebral glutamic acid decarboxylase, 52
- HOUGHTON, G. W. and RICHENS, A. Inhibition of phenytoin metabolism by sulthiame, 157P
- HUGHES, J. Inhibition of noradrenaline release by lysergic acid diethylamide, 706
- HUGHES, R., PAYNE, J. P. and SUGAI, N. Tetanic and single twitch responses of skeletal muscle during repeated injections of suxamethonium in man, 151P
- HUTCHINSON, M. *See* GILBERT, J. C., 166P

I

- IMPICCIATORE, M. *See* BERTACCINI, G., 437
- INNES, I. R. *See* BOSE, D., 466

J

- JACKSON, D. M. *See* CHESHER, G. B., 588
 JAGGARD, PAMELA J. *See* EVANS, M. H., 651
 JONDORF, W. R., MCKNIGHT, A. T. and MILLER, R. W. Some liver microsomal effects of sparsomycin, 148P
 JORI, A. *See* CACCIA, S., 400

K

- KABA, A. *See* GODFRAIND, T., 164P
 KATZ, B. and MILEDI, R. The effect of α -bungarotoxin on acetylcholine receptors, 138
 KAYE, C. M., ROBINSON, D. G. and TURNER, P. The influence of urine pH on the renal excretion of practolol and propranolol, 155P
 KELLET, D. N. *See* BRITTAİN, R. T., 158P
 KELLY, M. J. *See* FOZARD, J. R., 182P
 KIRBY, MARILYN J. *See* FORSLING, MARY L., 152P
 KOSTERLITZ, H. W. *See* GILBERT, J. C., 166P
 KUCHII, M., MIYAHARA, J. T. and SHIBATA, S. [3 H]-adenine nucleotide and [3 H]-noradrenaline release evoked by electrical field stimulation, perivascular nerve stimulation and nicotine from the taenia of the guinea-pig caecum, 258
 KUCHII, M., MIYAHARA, J. T. and SHIBATA, S. [3 H]-adenosine nucleotide and [3 H]-noradrenaline uptake by cold-stored guinea-pig taenia caecum; mechanical effects and release of [3 H]-adenosine nucleotide by noradrenaline, papaverine and nitroglycerine, 642
 KUHN, D. C. and WILLIS, A. L. Prostaglandin E_2 inflammation and pain threshold in rat paws, 183P

L

- LANGER, S. Z. *See* ENERO, MARIA A., 214
 LARGE, B. J. *See* FENIUK, W., 144P
 LARGE, B. J. and WRIGHT, JACQUELINE L. Some actions of sympathomimetic amines and their antagonists on mouse superfused ileum, 702
 LASZIO, I. *See* DOW, R. C., 580
 LASZLO, I. (introduced by ASHCROFT, G. W.). The use of model droplets in monoamine histochemistry and some problems of colour photomicrography, 179P
 LAWRENCE, D. K. and PERTWEE, R. G. Brain levels of Δ^1 -tetrahydrocannabinol and its metabolites in mice tolerant to the hypothermic effect of Δ^2 -tetrahydrocannabinol, 373
 LEONARD, B. E., NEUHOFF, V. and OSBORNE, N. N. Use of dansyl chloride to detect amino acids and 5-hydroxytryptamine in small quantities of tissue, 178P
 LEONARD, B. E. and RIGTER, H. The effect of α -methyl-p-tyrosine, p-chlorophenylalanine, methysergide and propranolol on CO_2 -induced amnesia in rats, 177P
 LEVY, BERNARD. The β -adrenoceptor blocking properties of the α -methyl analogues of propranolol and practolol in the anaesthetized dog, 506
 LEVY, L. *See* BECK, FRANCES J., 293
 LEWIS, G. P. *See* BACH, CATHERINE, 160P
 LI, D. M. F. *See* GRAHAM, J. D. P., 1
 LITTLEJOHNS, D. W. *See* GRAHAM, B. R., 154P
 LODGE, D. *See* BISCOE, T. J., 174P
 LOVEDAY, C. *See* EISEN, V., 678

LOVEDAY, C. *See* EISEN, V., 685

LUNDELL, L. Mobilization of gastric mucosal histamine and gastric secretion after H-receptor blockade, 714

M

- MACNEE, C. *See* Crooks, J., 156P
 MAGOS, L. and OHSAWA, M. Biliary excretion of methylmercury in male rats, 149P
 MAIN, I. H. M. and WHITTLE, B. J. R. Potentiation of dibutyryl cyclic 3'5'-AMP-induced gastric acid secretion in rats by non-steroidal anti-inflammatory drugs, 162P
 MAIN, I. H. M. and WHITTLE, B. J. R. The effects of E and A prostaglandins on gastric mucosal blood flow and acid secretion in the rat, 428
 MAIN, I. H. M. and WHITTLE, B. J. R. Gastric mucosal blood flow during pentagastrin- and histamine-stimulated acid secretion in the rat, 534
 MALCOLM, J. L. *See* ANDERSON, CAROLINE, 176P
 MANNAIONI, P. F. *See* FANTOZZI, R., 358
 MANNAIONI, P. F. and MORONI, F. Uptake and metabolism of histamine in isolated heart preparations, 457
 MARCHANT-WILLIAMS, H. *See* CHESHER, G. B., 588
 MARSHALL, R. J. and PARRAT, J. R. The simultaneous measurement of blood flow and oxygen handling in normal and ischaemic areas of the myocardium in the dog, 188P
 MARSHALL, R. J. and PARRAT, J. R. The effects of dipyridamole on blood flow and oxygen handling in the acutely ischaemic and normal canine myocardium, 391
 MAXWELL, D. R. *See* BONTA, I. L., 161P
 MAXWELL, G. M. The effects of a new α - and β -adrenoceptor antagonist (AH 5158) upon the general and coronary haemodynamics of intact dogs, 370
 MCCAFFERY, H. *See* GILLESPIE, J. S., 188P
 MCCULLOCH, M. W., RAND, M. J. and STORY, D. F. Evidence for a dopaminergic mechanism for modulation of adrenergic transmission in the rabbit ear artery, 141P
 MCGILLION, F. B. *See* GOLDBERG, A., 178P
 MCGRATH, J. C. *See* GILLESPIE, J. S., 188P
 MCKNIGHT, A. T. *See* JONDORF, W. R., 148P
 MELDRUM, B. S. *See* HORTON, R. W., 52
 MILEDI, R. *See* KATZ, B., 138
 MILLER, R. W. *See* JONDORF, W. R., 148P
 MITCHELL, J. F. *See* BRANCH, R. A., 149P
 MITCHELL, J. F. and YATES, R. A. Amino acids in the frog central nervous system, 171P
 MIYAHARA, J. T. *See* KUCHII, M., 258
 MIYAHARA, J. T. *See* KUCHII, M., 642
 MONCADA, S. *See* FERREIRA, S. H., 86
 MONTEL, H. and STARKE, K. Effects of narcotic analgesics and their antagonists on the rabbit isolated heart and its adrenergic nerves, 628
 MORGAN, B. *See* ENGLISH, P. D., 147P
 MORONI, F. *See* FANTOZZI, R., 358
 MORONI, F. *See* MANNAIONI, P. F., 457
 MUIR, T. C. The response of the rat anococcygeus muscle to electrical stimulation of the inhibitory nerves and to drugs, using, simultaneously, mechanical and intracellular electrical recording techniques, 186P
 MUIR, T. C., POLLOCK, D. and TURNER, C. J. The effects of electrical stimulation of the sympathetic nerves on the size and mitotic index of rat salivary glands, 186P

N

- NAYLOR, R. J. *See* COSTALL, B., 29
 NEAL, M. J. and WHITE, R. D. Multiplicity of transport systems for L-glutamate and L-aspartate in the retina, 172P
 NEAT, M. L. *See* BRITTAIN, R. T., 158P
 NEUHOFF, V. *See* LEONARD, B. E., 178P
 NG, K. K. *See* FERREIRA, S. H., 543
 NICOL, C. (introduced by BLAKELEY, A. G. H.). A method for perfusing the whole rabbit ear with homologous blood, 184P
 NIES, A. S. *See* BRANCH, R. A., 149P
 NORTH, R. A. The slow, calcium-dependent after-hyperpolarization in myenteric plexus neurones with tetrodotoxin-resistant action potentials, 709

O

- O'DONNELL, STELLA R. and SAAR, NILI. A histochemical study of extraneuronal accumulation of noradrenaline in the guinea-pig trachea, 267
 OHSAWA, M. *See* MAGOS, L., 149P
 ORBACH, J. *See* ANDREWS, W. H. H., 192
 OSBORNE, N. N. (introduced by COTTRELL, G. A.). Application of the dansyl procedure to study the metabolism and accumulation of 5-hydroxytryptamine in characterized neurones of *Helix pomatia*, 170P
 OSBORNE, N. N. *See* LEONARD, B. E., 178P

P

- PALMER, M. A., PIPER, PRISCILLA J. and VANE, J. R. Release of rabbit aorta contracting substance (RCS) and prostaglandins induced by chemical or mechanical stimulation of guinea-pig lungs, 226
 PARRAT, J. R. *See* MARSHALL, R. J., 188P
 PARRAT, J. R. *See* MARSHALL, R. J., 391
 PARRAT, J. R. and STURGESS, R. The effect of indomethacin on the cardiovascular responses of cats to *E. coli* endotoxin, 163P
 PARVATHY, S. *See* GHOSH, M. N., 658
 PATERSON, J. W. *See* EVANS, MARION E., 153P
 PATON, D. M. Effect of sympathomimetic amines on the efflux of noradrenaline from adrenergic nerves in rabbit atria, 142P
 PATON, D. M. Mechanism of efflux of noradrenaline from adrenergic nerves in rabbit atria, 614
 PAYNE, J. P. *See* HUGHES, R., 151P
 PERTWEE, R. G. *See* LAWRENCE, D. K., 373
 PHILLIPS, ELIZABETH A. *See* GOADBY, P., 368
 PIC, P. *See* CUTHBERT, A. W., 134
 PIPER, PRISCILLA J. *See* PALMER, M. A., 226
 POLLOCK, D. *See* GIBSON, A., 165P
 POLLOCK, D. *See* GIBSON, A., 506
 POLLOCK, D. *See* GIBSON, A., 725
 POLLOCK, D. *See* MUIR, T. C., 186P
 POSNER, J. Prostaglandin E_2 and the bovine sphincter pupillae, 415
 POWIS, G. *See* BLAKELEY, A. G. H., 188P
 POWIS, G. *See* BOOBIS, A., 185P
 POYSER, N. L. *See* HORTON, E. W., 98
 POYSER, R. H. *See* ENGLISH, P. D., 147P
 PRESCOTT, L. F. and WRIGHT, N. The effects of hepatic and renal damage on paracetamol metabolism and excretion following overdosage. A pharmacokinetic study, 602
 PRICHARD, B. N. C. *See* GRAHAM, B. R., 154P
 PULLMAN, L. G. *See* ADAM, K. R., 560
 PURVES, R. D. *See* FASTIER, F. N., 490
 PYCOCK, C. J. *See* ABBS, E. T., 11

R

- RAND, M. J. *See* MCCULLOCH, M. W., 141P
 RANG, H. P. *See* HARVEY, S. C., 169P
 REDFERN, P. H. *See* DAVIES, J. A., 121
 REIT, E. *See* BLOCK, A. J., 74
 RIBEIRO, J. A. and WALKER, J. Action of adenosine triphosphate on endplate potentials recorded from muscle fibres of the rat-diaphragm and frog sartorius, 723
 RICHENS, A. *See* HOUGHTON, G. W., 157P
 RICHENS, A. and WATSON, JUDITH M. Effects of salbutamol and terbutaline on physiological tremor in man, 187P
 RIGTER, H. *See* LEONARD, B. E., 177P
 RITCHIE, ISOBEL. *See* DOW, R. C., 580
 ROBERTS, M. H. T. *See* BEVAN, P., 173P
 ROBERTS, M. H. T. *See* BRADSHAW, C. M., 667
 ROBINSON, D. G. *See* KAYE, C. M., 155P
 ROJAS, R. *See* GODFRAIND, T., 164P

S

- SAAR, NILIX. *See* O'DONNELL, STELLA R., 267
 SAWYER, P. R. and TURNBULL, M. J. Effect of tricyclic antidepressants on the cardiovascular response of the rat, 142P
 SCALES, B. *See* GRAHAM, B. R., 154P
 SCHILD, H. O. An effect of calcium on histamine desensitization of guinea-pig ileum, 717
 SCHNEIDER, F. H. *See* HOLMES, J. C., 205
 SCHOLFIELD, P. C. *See* ADAM, K. R., 560
 SHAND, D. G. *See* BRANCH, R. A., 149P
 SHENFIELD, GILLIAN M. *See* EVANS, MARION E., 153P
 SHIBATA, S. *See* KUCHII, M., 258
 SHIBATA, S. *See* KUCHII, M., 642
 SHYAMALAKUMARI, S. *See* HARANATH, P. S. R. K., 23
 SIMMONDS, M. A. *See* HILL, R. G., 37
 SIMPSON, G. M. *See* BERGNER, P-E. E., 328
 SIMPSON, P. J. *See* FORSLING, MARY L., 152P
 SMALL, R. C. *See* FOZARD, J. R., 182P
 SMITH, J. R. *See* GHANI, M. F., 554
 SOUTHOORN, P. *See* GRAHAM, B. R., 154P
 SRIMAL, R. C. *See* DHAWAN, B. N., 64
 STABLES, R. *See* BRITTAIN, R. T., 158P
 STARKE, K. *See* MONTEL, H., 628
 STARMER, G. A. *See* CHESHER, G. B., 588
 STEPHENS, R. J. The influence of mild stress on food consumption in untrained mice and the effect of drugs, 146P
 STEVENSON, I. H. *See* CROOKS, J., 156P
 STEVENSON, R. W. and WILSON, W. S. Depletion of acetylcholine in the corneal epithelium, 167P
 STJARNE, L. Frequency dependence of dual negative feedback control of secretion of sympathetic neurotransmitter in guinea-pig vas deferens, 355
 STONE, T. W. *See* ANDERSON, CAROLINE, 176P
 STORY, D. F. *See* MCCULLOCH, M. W., 141P
 STRAUGHAN, D. W. *See* HILL, R. G., 37
 STURGESS, R. *See* PARRAT, J. R., 163P
 SUGAI, N. *See* HUGHES, R., 151P
 SUMMERS, R. J. *See* BLAKELEY, A. G. H., 188P
 SWANSTON, D. W. *See* BALLANTYNE, B., 181P
 SZABADI, E. *See* BEVAN, P., 173P
 SZABADI, E. *See* BRADSHAW, C. M., 667

T

- TAYLOR, DOROTHY. *See* ENGLERT, L. F., 243
 TAYLOR, K. M. *See* FASTIER, F. N., 490

TAYO, F. M. *See* FURMAN, B. L., 145P
 THOMAS, N. *See* EVANS, MARION E., 153P
 TINSTON, D. J. *See* CLARK, D. G., 355
 TODRICK, A. *See* CAMPBELL, I. C., 279
 TOWART, R. (introduced by WILSON, C. W. M.).
 A simple low-cost freeze-drier, 180P
 TURNBULL, M. J. *See* SAWYER, P. R., 142P
 TURNER, C. J. *See* MUIR, T. C., 186P
 TURNER, P. *See* KAYE, C. M., 155P
 TWITE, B. R. *See* FERGUSON, D. R., 288

U

UBATUBA, F. B. The use of the hamster stomach
in vitro as an assay preparation for prostaglandins, 662

V

VANDERPE, D. R. *See* GHANI, M. F., 554
 VANE, J. R. *See* FERREIRA, S. H., 86
 VANE, J. R. *See* FERREIRA, S. H., 543
 VANE, J. R. *See* PALMER, M. A., 226
 VAPTZAROVA, K. *See* ČIHÁK, A., 253
 VARAGIĆ, V. M. and ŽUGIĆ, M. The effect of
 N⁶-2'-O dibutyryl 3', 5' cyclic adenosine
 monophosphate, imidazole and aminophylline
 on ganglionic transmission in the superior
 cervical ganglion of the cat, 407

W

WALKER, J. *See* RIBEIRO, J. A., 723
 WALKER, J. M. J. H. Burn's eightieth birthday,
 189

WALKER, R. J. *See* CROSSMAN, A. R., 696
 WALKER, S. R. *See* EVANS, MARION E., 153P
 WALLIS, D. I. and WOODWARD, B. The depolarizing
 action of 5-hydroxytryptamine on
 sympathetic ganglion cells, 168P
 WANG, J. C. C. *See* CHENG, C. P. K., 727
 WATSON, JUDITH M. *See* RICHENS, A., 187P
 WELLS, P. W. *See* EYRE, P., 364
 WEST, G. B. *See* EISEN, V., 685
 WHITE, R. D. *See* NEAL, M. J., 172P
 WHITEHOUSE, M. W. *See* BECK, FRANCES, J., 293
 WHITING, R. L. *See* ENGLISH, P. D., 147P
 WHITTLE, B. J. R. *See* MAIN, I. H. M., 162P
 WHITTLE, B. J. R. *See* MAIN, I. H. M., 428
 WHITTLE, B. J. R. *See* MAIN, I. H. M., 534
 WILLIS, A. L. *See* DAVISON, PAMELA, 188P
 WILLIS, A. L. *See* KUHN, D. C., 183P
 WILLIS, JULIA. *See* COX, B. M., 159P
 WILSON, C. W. M. *See* TOWART, R., 180P
 WILSON, H. *See* ECCLES, R., 711
 WILSON, W. S. *See* STEVENSON, R. W., 167P
 WOMERSLEY, J. *See* DURNIN, J. V. G. A., 115
 WOODRUFF, G. N. *See* CROSSMAN, A. R., 696
 WOODWARD, B. *See* WALLIS, D. I., 168P
 WRIGHT, JACQUELINE L. *See* LARGE, B. J., 702
 WRIGHT, N. *See* PRESCOTT, L. F., 602

Y

YATES, R. A. *See* MITCHELL, J. F., 171P
 YOUNG, J. M. *See* CUTHBERT, A. W., 498

Z

ŽUGIĆ, M. *See* VARAGIĆ, V. M., 407

SUBJECT INDEX

A

- Acetylcholine**, cannabis reduced reflex vasoconstriction elicited by, 1
- , changes in response of rat uterus to, affected by histamine and depolarizing, 445
- , content, effect of electrical stimulation of myenteric plexus-longitudinal muscle preparation of the guinea-pig ileum on its, 166P
- , depletion of, in corneal epithelium, 167P
- , effects of drugs on the sensitivity of the rat anococcygeus muscle to, 506
- , dual action of tricyclic antidepressant drugs on responses of single cortical neurones to, 173P
- , effect of on accumulation of calcium at motor endplates, 168P
- , effect on hepatic nerves, 192
- , effect on uterine artery, 595
- , drug-induced changes in sensitivity to, in rat anococcygeus muscle, 165P
- , influence of histamine and other vasoactive substances on contractile responses of cat skeletal muscle to, 74
- , muscarinic, receptors, labelled in aneuronal muscle of amniotic membranes of chick embryos, 498
- , observations on 'fade': a complication of the contractile response of smooth muscle to a large dose of, 490
- , receptors, effect of α -bungarotoxin on, 138
- , receptors, fraction of TSV binds to, 340
- , role of brain, in the pressor response to centrally injected neostigmine, 557
- Adrenaline**, effect on hepatic nerves, 192
- , induction of acute massive pulmonary oedema in the dog by, 727
- Adrenergic nerves**, affected by narcotic analgesics, 628
- , effects of bretylium on, function, in rat heart, 11
- , mechanism of efflux of noradrenaline from, 624
- , effect of sympathomimetic amines on the efflux of noradrenaline from, 143P
- Adrenergic transmission**, evidence for dopaminergic mechanism for modulation of, in the rabbit ear artery, 141P
- [³H]-**adenine nucleotide**, release evoked by electrical field stimulation, perivascular nerve stimulation and nicotine from the taenia of the guinea-pig caecum, 258
- 3',5'-adenosine monophosphate**, effect of adrenoceptors on level of, in gills, 134
- Adenosine triphosphate**, action of on endplate potentials recorded from muscle fibres of the rat-diaphragm and frog sartorius, 723
- [³H]-**adenosine nucleotide**, in taenia caecum, 642
- Adenyl cyclase**, and adrenoceptors, in gills, 134
- Adrenoceptors**, and adenyl cyclase in gills, 134
- α -**adrenoceptor**, pre-junctional, evidence for, through which noradrenaline release is inhibited, 141P
- β -**adrenoceptor**, blocking properties of α -methyl propranolol and α -methyl practolol in the anaesthetized dog, 506
- , blocking drugs, isoprenaline- and exercise-induced tachycardia in the assessment of, 560
- , assessment of selective, blockade in man, 106
- AH 5158**, effects of a new α - and β -adrenoceptor antagonist, upon the general and coronary haemodynamics of intact dogs, 370
- Alkylating agents**, local graft versus host reaction in the rat as means of detecting, 293
- Allylglycine**, seizures induced by, and different modes of inhibition of cerebral glutamic acid decarboxylase, 52
- DL-C-Allylglycine**, seizures induced by, and different modes of inhibition of cerebral glutamic acid decarboxylase, 52
- Amines**, sympathomimetic, effect of, on the efflux of noradrenaline from adrenergic nerves, 142P
- , sympathomimetic, some actions of and their antagonists on mouse superfused ileum, 702
- Amine-uptake mechanism**, the pharmacology and biochemistry of the, in human blood platelets, 279
- Amino acids**, use of dansyl chloride to detect, in small quantities of tissue, 178P
- , in the frog central nervous system, 171P
- δ -**aminobutyric acid**, a comparative study of some convulsant substances as, antagonists in the feline cerebral cortex, 37
- , picrotoxin antagonism of, inhibitory responses and synaptic inhibition in the rat substantia nigra, 696
- δ -**aminolaevulinic acid**, central uptake and cardiovascular effects of, 178P
- Aminophylline**, effect of, on ganglionic transmission in the superior cervical ganglion of the cat, 407
- Aminopyrine clearance**, measurement of mucosal blood flow in rat compared with that obtained in dog and cat by, 534
- Amitriptyline**, comparison of the catecholamine potentiating and anti-cholinergic activity of, 142P
- Amphetamine**, effect of on bretylium-induced adrenergic neurone blockade and subcellular distribution of noradrenaline, 11
- , effect of, on maze exploration in the rat, 121
- , role of the substantia nigra in the locomotor stimulant action of, 29
- , tolerance patterns of anorexigenic action of, 658
- (+)-**amphetamine**, antagonism of the effects of iontophoretically applied, by chlorpromazine on single neurones, 175P
- , after administration of, rats with unilateral ablations of the frontal cortex rotated either ipsilaterally or contralaterally as a function of time after surgery, 316
- , effect of, on food intake of mice under stress, 146P
- , interaction of, with cerebral dopaminergic neurones in two strains of mice that show different temperature responses to the drug, 400
- Amylobarbitone**, effect of, on food intake of mice under stress, 146P
- Anaphylaxis**, histamine H_2 -receptors modulate systemic, 364
- Angiotensin**, centrally administered, drinking in the cat induced by, 150P
- [¹⁴C]-**aniline clearance**, measurement of mucosal blood flow using, 534

Anococcygeus muscle, rat, preparation *in vitro* and *in vivo*, 188P
Anorexigenic action, tolerance pattern with amphetamine, 658
Antinociceptive effects, of cannabinoids, 588
Anti-proliferative agents, local graft versus host reaction in the rat as a means of detecting, 293
Arthritis, blood changes in experimental, in rats, 685
L-aspartate, multiplicity of transport systems for, in the retina, 172P
Aspirin, effect on hepatic nerves, 192
Aspirin-like drugs, prostaglandins and the mechanism of analgesia produced by, 86
[³H]-ATP, converted from [³H]-adenosine, 642
Atropine, effect on hepatic nerves, 192
 —, electrical basis of the mechanical relaxation of rat anococcygeus muscle and the effect of, upon these, 186P
 —, failure to produce rhythmical field potentials in Inferior Olive Complex, 174P
 —, no significant effect on learning tests, performance in man, 322

B

Barbitone, effect in contributing to barbiturate intolerance in rats, 527
Barbiturate intolerance, mechanisms contributing to, in rats, 527
Barium, effect of histamine on contractures induced by, in rat uterus, 445
Bicuculline, antagonistic effect of on GABA, 37
 —, rhythmical field potentials induced in Inferior Olive Complex by iontophoretically applied, 174P
Bioassay, continuous, of the release and disappearance of histamine in the circulation, 543
Biphasic bradykinin response, potentiation of, of the guinea-pig ileum, 161P
Blood clotting, effect of suramin on, 678
Blood, simultaneous measurement of, flow and oxygen handling in normal and ischaemic areas of the myocardium in the dog, 188P
Bombesin, actions of, on gastric secretion of the dog and the rat, 437
Bradycardia, effected by various anaesthetics, 565
Bradykinin, effect on hepatic nerves, 192
 —, increased production of prostaglandin-like material by, 86
 —, influence of, on contractile responses of cat skeletal muscle to acetylcholine, 74
 —, potentiation of the biphasic response of the guinea-pig ileum, 161P
 —, some actions of, on the mouse isolated ileum, 144P
 —, use of cat jejunum strip to distinguish, from histamine in continuous bioassay, 543
Bretylium, effects of, on the subcellular distribution of noradrenaline and on the adrenergic nerve function in rat heart, 11
Bromotrifluoromethane, correlation of cardiac sensitizing potential with physicochemical properties of, 355
Bumetamide, inhibition of a cAMP-dependent protein kinase enzyme from toad bladder epithelium by, 288
 α -bungarotoxin, effect of, on acetylcholine receptors, 138
Burimamide, effect of histamine on responses to acetylcholine and relaxation of calcium-induced contractures abolished by, 445
 —, inhibition of histamine uptake and metabolism by, 361
 —, some effects of on the isolated perfused pulmonary circulation of the guinea-pig, 368
Burn, J. H.'s eightieth birthday, 189

C

Calcium accumulation, some characteristics of, at motor endplates of mouse diaphragm, 168P
Calcium channels, inhibition by cinnarizine of, opening in depolarized smooth muscle, 164P
Calcium, effect of, on 'fade': a complication of the contractile response of smooth muscle to a large dose of an agonist, 490
 —, effect of histamine on contractures induced by, in rat uterus, 445
 —, an effect of on histamine desensitization of guinea-pig ileum, 717
Cannabis, cardiovascular and respiratory effects of, in cat and rat, 1
Cannabis extract, intestinal and antinociceptive effects, 588
Cannabidiol, cardiovascular and respiratory effect of, 1
 —, intestinal and antinociceptive effects, 588
 —, cardiovascular and respiratory effect of, 1
Cannabinoids, intestinal and antinociceptive effects, 588
Cardiac anaphylaxis, uptake and metabolism of histamine reduced by combining, and (+)-tubocurarine, 457
Carbachol, effect on accumulation of calcium at motor endplates, 168P
 —, observations on 'fade': a complication of the contractile response of smooth muscle to a large dose of, 490
 —, tiger snake venom inhibits depolarization of muscle fibres caused by, 340
Carbon tetrachloride, correlation of cardiac sensitizing potential with physicochemical properties of, 355
Cardiovascular, and respiratory effects of cannabis in cat and rat, 1
Cardiovascular responses, to noradrenaline in conjunction with anaesthetics, 565
Catecholamine secretion, inhibited by pentobarbitone, 205
Caerulein, contrast with gastric action of bombesin, 437
Centchroman, anti-inflammatory and other pharmacological effects of, 64
Chloralose, effect on pressor response to noradrenaline, 565
Chlordane, effects of, on conditioned avoidance response, brain seizure threshold and open-field performance of prenatally-treated mice, 311
Chlordiazepoxide, effect of, on food intake of mice under stress, 146P
Chlormipramine, comparison of the catecholamine potentiating and anti-cholinergic activity of, 142P
p-chloromercuribenzoate, inhibitory activity on uptake of 5-HT by human blood platelets, 279
Chlorpheniramine, effect on hepatic nerves, 192
p-chlorophenylalanine, effect of, on CO₂-induced amnesia in rats, 177P
Chlorpromazine, antagonism of the effects of iontophoretically applied (+) - amphetamines by, 175P
 —, effects of, on exploration and habituation in the rat, 303

—, effect of, on food intake of mice under stress, 146P

Chlorotrifluoromethane, correlation of cardiac sensitizing potential with physicochemical properties of, 355

Chroman derivative, see Centchroman, 64

Cinnarizine, inhibition by, of calcium channels opening in depolarized smooth muscle, 164P

Clonidine actions, localization of, 573

Clonidine, effects of, on single cortical and medullary neurones, 176P

Cocaine, effect on noradrenaline and nucleoside uptakes by taenia caecum, 642

—, effects of, on the sensitivity of rat anococcygeus muscle to agonists, 506

—, effect of, on sensitivity of rat anococcygeus muscle, 165P

Cold storage, effect on noradrenaline uptake by taenia caecum, 642

Complement, effect of suramin on, 678

Corpora Lutea, effect of indomethacin on, in guinea-pig, 98

Corticosterone, effect of, on sensitivity of rat anococcygeus muscle, 165P

Cromoglycate, effect of, on anaphylactic histamine release from rat peritoneal mast cells, 128

Crystal violet, eye damage caused by, 181P

C.S.F., artificial, effect of on body temperature in dogs of perfusion of cerebral ventricles, when deficient in calcium or containing excess of sodium or calcium, 699

Cyclic 3', 5'-AMP-dependent protein kinase, inhibition by diuretics of, from toad bladder epithelium, 288

Cyclohexylmethylbenzamides, N-substituted, antinociceptive effects in, 158P

D

Dansyl chloride, use of, to detect amino acids and 5-hydroxytryptamine in small quantities of tissue, 178P

Dansyl procedure, application of, to study metabolism and accumulation of 5-hydroxytryptamine in characterized neurones of *Helix pomatia*, 170P

4-deoxyypyridoxine hydrochloride, seizures induced by, and different modes of inhibition of cerebral glutamic acid decarboxylase, 52

Desmethylinipramine, comparison of the catecholamine potentiating and anti-cholinergic activity of, 142P

Diazepam, effect of, on food intake of mice under stress, 146P

Dichlorodifluoromethane, correlation of cardiac sensitizing potential with physicochemical properties of, 355

Dichlorofluoromethane, correlation of cardiac sensitizing potential with physicochemical properties of, 355

Dichlorotetrafluoroethane, correlation of cardiac sensitizing potential with physicochemical properties of, 355

Dibutyl cyclic 3', 5'-AMP-induced, gastric acid secretion, potentiation of, by non-steroidal anti-inflammatory drugs, 162P

N⁶, 2'-O dibutyl 3', 5' cyclic adenosine monophosphate, effect of, on ganglionic transmission in the superior cervical ganglion of the cat, 407

Diethyl ether, effect on pressor response to noradrenaline, 565

Digitoxigenin bisdigitoxoside, time courses of the change in contractile force and in transmembrane potentials induced by, in guinea-pig papillary muscle, 377

Digoxigenin bisdigitoxoside, time courses of the change in contractile force and in transmembrane potentials induced by, in guinea-pig papillary muscle, 377

Dihydro- β -erythroidine, rhythmical field potentials induced in Inferior Olive Complex by iontophoretically applied, 174P

1,1-dimethyl-4-phenyl-piperazinium iodide, ganglionic response to, potentiated by imidazole, depressed by aminophylline, 407

3,4 - trans - 2,2 - dimethyl - 3 - phenyl - 4 - [p - (β - pyrrolidinoethoxy)-phenyl]-7-methoxy-chroman, anti-inflammatory and some other pharmacological effects of, 64

Dipyridamole, effect of, on blood flow and oxygen handling in the acutely ischaemic and normal canine myocardium, 391

Diuretics, inhibition by, of cycle 3', 5'-AMP-dependent protein kinase from toad bladder epithelium, 288

DMSO, effects of on frog neuromuscular junction, 651

DNA, decreased synthesis of, in regenerating rat liver after the administration of reserpine, 253

Dopamine, metabolism of, difference in, in two strains of mice, 400

Dopaminergic mechanism, evidence for a, for modulation of adrenergic transmission in the rabbit ear artery, 141P

Dopaminergic nigro-striatal system, suggested modulated by the frontal cortex, 316

Dosage pattern, effect in variation in, lithium kinetics in man, 328

Drug absorption, a technique for studying, from the lung, in man, 153P

Drug activity, the prediction of, 178P

Drug effects, developing skeletal muscle fibres as a test system for the measurement of, 188P

Drug mechanism studies, local graft versus host reaction in the rat as a tool for, 293

Drug metabolizing ability, changes in, thyroid disease, 156P

E

***E. coli* endotoxin**, effect of indomethacin on the cardiovascular responses of cats to, 163P

Electrical properties, measurement of, of the smooth muscle cell membrane of the rat anococcygeus, 188P

Electrical stimulation, effect of, on acetylcholine content of myenteric plexus-longitudinal muscle preparation of the guinea-pig, 166P

—, effect of, on the size and mitotic index of rat salivary glands, 186P

—, response of rat anococcygeus muscle to, of the inhibitory nerves and to drugs, 186P

Ethacrynic acid, inhibition of a cAMP-dependent protein kinase enzyme from toad bladder epithelium by, 288

Ether oxygen, effect on nicotine-like activity in phenylalkyl and phenoxyalkyl trimethylammonium and triethylammonium salts, 480

Ethyl oleate/Krebs solution partition coefficient, the relationship between, and depression of myocardial contractile force in a number of pharmacologically active compounds (T), 178P

Ethyleneglycol bis-aminoethyl ether-tetraacetic acid, abolition of relaxant effect of histamine in rat uterus by, 445

2 - (3 - ethylsulphinypropyl) - 1,2,3,4, - tetrahydroisoquinoline hydrochloride, effects of, in experimental cardiogenic shock, 554

Eserine sulphate, effect of on accumulation of calcium at motor endplates, 168P

F

Feedback mechanism, negative, effected by reserpine-induced depletion of noradrenaline, 214

Fenfluramine, effect of, on food intake of mice under stress, 146P

—, the metabolic effects, and the composition of the tissue lost, in weight reduction by obese patients on treatment with, 115

Fentanyl, effects on heart, 628

Fibrinolysis, effect of suramin on, 678

Foreign compounds, metabolism of, isolated perfused rat liver in the study of, 185P

Formaldehyde-induced arthritis, anti-arthritic activity of Centchroman, 64

Freeze-drier, a simple low-cost, 180P

Fruzemide, inhibition of a cAMP-dependent protein kinase enzyme from toad bladder epithelium by, 288

G

Gallamine triethiodide, rhythmical field potentials induced in Inferior Olive Complex by iontophoretically applied, 174P

Gastric acid, effects of E and A prostaglandins on, secretion in the rat, 428

Gastric mucosal blood flow, during pentagastrin and histamine stimulated acid secretion in the rat, 534

Gastric acid secretion, potentiation of dibutyryl cyclic 3'5'-AMP-induced, by non-steroidal anti-inflammatory drugs, 162P

Gastrin, contrast with gastric action of bombesin, 437

Glucagon, influence of, on regional blood flow in the rhesus monkey, 149P

Glucose-deprivation, histamine uptake in the heart blocked by hypoxia plus, 457

L-glutamate, multiplicity of transport systems for, in the retina, 172P

— **1-carboxy-lyase**, different modes of inhibition of, by allylglycine, 3-mercaptopyruvic acid and 4-deoxypyridoxine, 52

Glutamic acid decarboxylase, different modes of inhibition of, by allylglycine, 3-mercaptopyruvic acid and 4-deoxypyridoxine, 52

Graft, local, versus host reaction in the rat as a tool for drug mechanism studies, 293

Guanethidine, electrical basis of the mechanical relaxation of rat anococcygeus muscle and the effect of, upon these, 186P

H

H-receptor blockade, mobilization of gastric mucosal histamine and gastric secretion after, 711

Hallucinogenic drugs, effects of, on maze exploration in the rat, 121

Halogenated hydrocarbons, correlation of the cardiac sensitizing potential of, with their physicochemical properties, 355

Haloperidol, effect of, on food intake of mice under stress, 146P

Halothane, correlation of cardiac sensitizing potential with physicochemical properties of, 355

Harmaline, rhythmical field potentials induced in Inferior Olive Complex by iontophoretically applied, 174P

Harmine, rhythmical field potentials induced in Inferior Olive Complex by iontophoretically applied, 174P

Heart, an isolated, innervated, blood perfused cat, preparation, 188P

Hepatic necrosis, following overdosage, 602

Hepatic nerves, stimulated and inhibited by compounds, 192

Hexamethonium, effect of on gastric action of bombesin, 437

—, effect on hepatic nerves, 192

—, effect of phenylalkyl- and phenoxyalkyl-trimethylammonium and triethylammonium salts in the presence of, on frog rectus and isolated guinea-pig ileum preparations, 480

Hexamethylparosaniline hydrochloride, eye damage caused by, 181P

Histamine, anaphylactic release, effect of cromoglycate on, from rat peritoneal mast cells, 128

—, cannabis reduced reflex vasoconstriction elicited by, 1

—, continuous bioassay of the release and disappearance of, in the circulation, 543

Histamine, desensitization of guinea-pig ileum, an effect of calcium on, 717

Histamine, gastric mucosal blood flow during, stimulated acid secretion in the rat, 534

Histamine, influence of, on contractile responses of cat skeletal muscle to acetylcholine, 74

—, inhibition of response of smooth muscle to, and effect of potassium and sodium pump on, 466

—, inhibition of, uptake and metabolism by burimamide, 361

—, mobilization of gastric mucosal, and gastric secretion after H-receptor blockade, 714

—, observations on 'fade': a complication of the contractile response of smooth muscle to a large dose of, 490

—, H₂-receptors, modulate systemic anaphylaxis: a dual cardiovascular action of histamine in calves, 364

—, some effects of in the depolarized rat uterus, 445

—, uptake, disposition and metabolism of, in isolated heart preparations, 457

Histamine-induced gastric acid secretion, inhibited by prostaglandins, 428

Homologous blood, a method for perfusing the whole rabbit ear with, 184P

Homovanillic acid, effect of (+)-amphetamine on the concentration of, in the striatum of two strains of mice compared, 400

Hydrochloric acid, effect of bombesin on gastric secretion of, 437

Hydrochlorothiazide, inhibition of a cAMP-dependent protein kinase enzyme from toad bladder epithelium by, 288

5-hydroxytryptamine, application of dansyl procedure to study metabolism and accumulation of, in characterized neurones of *Helix pomatia*, 170P

—, cellular localization of uptake in area postrema, 580

—, depolarizing action of, on sympathetic ganglion cells, 168P

- , relation between concentration of, and its fluorescence intensity and colour of fluorescence, 179P
- , effect of Δ^9 -THC on brain levels of, after reserpine-induced hypothermia, 243
- , effect on hepatic nerves, 192
- , uptake of, in human blood platelets, 279
- , use of dansyl chloride to detect, in small quantities of tissue, 178P
- 6-Hydroxytryptamine**, chemical sympathectomy of the rabbit with, 182P
- , effect of, on sensitivity of rat anococcygeus muscle, 165P
- , effects of, on the sensitivity of rat anococcygeus muscle to agonists, 506
- , failure to affect uptake of histamine in heart preparation, 457
- Hyoscine**, analysis of the learning deficit following, administration to man, 322
- Hypoxia**, histamine uptake in the heart blocked by, plus glucose deprivation, 457

I

- ICI 66082**, preliminary observations on the human pharmacology of, in normal volunteers, 154P
- Imidazole**, effect of, on ganglionic transmission in the superior cervical ganglion of the cat, 407
- Imipramine**, comparison of the catecholamine potentiating and anti-cholinergic activity of, 142P
- , effect of, on food intake of mice under stress, 146P
- Immunosuppressant drugs**, some novel, described, 293
- Indomethacin**, effect of, on the cardiovascular responses of cats to *E. coli* endotoxin, 163P
- , effects of, on changes in production of prostaglandin-like material induced by bradykinin, 86
- , elongation of oestrous-cycle in the guinea-pig following subcutaneous or intrauterine administration of, 98
- , potentiation of dbcAMP-induced gastric-acid secretion by, 162P
- Insulin**, inhibitory effect of propranolol on, secretion, 145P
- Iodoacetate**, inhibitory activity on uptake of 5-HT by human blood platelets, 279
- Isoprenaline**, β -adrenoceptor blocking properties of α -methyl propranolol and α -methyl practolol determined according to abilities to modify, induced effects, 514
- , induced tachycardia in the assessment of β -adrenoceptor blocking drugs, 560
- , inhibitory effect of maintained in depolarized rat uterus, 445

K

- K⁺**, effect of deficiency on uptake of 5-HT by human blood platelets, 279
- Kallikrein-like substance**, a, in cat nasal secretion, 711
- Ketamine**, effect on pressor response to noradrenaline, 565
- , possible mechanisms of action for the influence of, on uterine tone, 152P
- Kinin formation**, effect of suramin on, 678

L

- Leptazol**, antagonistic effect of on GABA, 37
- Levellorphan**, effects on heart, 628

- Lignocaine**, effect on hepatic nerves, 192
- Lithium kinetics**, in man; effect of variation in dosage pattern, 328
- Liver**, isolated perfused rat, in study of metabolism of foreign compounds, 185P
- LSD**, effect of, on maze exploration in the rat, 121
- Lung**, drug absorption from, a technique for studying, in man, 153P
- Lymph**, skin and muscle, from the rabbit hind limb, 160P
- Lysergic acid diethylamide**, inhibition of noradrenaline release by, 796

M

- M & B 17,803A**, assessment of β -adrenoceptor blocking effect, 106
- Meprobamate**, effect of, on food intake of mice under stress, 146P
- Mepyramine**, effect on hepatic nerves, 192
- , potentiating effect of histamine on contractile responses to acetylcholine antagonized by, 74
- 3-mercaptopropionic acid**, seizures induced by, and different modes of inhibition of cerebral glutamic acid decarboxylase, 52
- Mercaderamide**, inhibition of a cAMP-dependent protein kinase enzyme from toad bladder epithelium by, 288
- Mescaline**, effect of, on maze exploration in the rat, 121
- Metacorticoid hypertension**, changes in serum and tissue lipid levels induced by, in rats, 147P
- Metaraminol**, effect of, on efflux of noradrenaline from adrenergic nerves, 143P
- Methadone**, effects on heart, 628
- Methylene chloride**, correlation of cardiac sensitizing potential with physicochemical properties of, 355
- Methylene**, effect on nicotine-like activity in phenylalkyl- and phenoxyalkyl-trimethylammonium and triethylammonium salts, 480
- Methyl-histamine**, retained metabolite of histamine in the heart, 457
- Methylmercury**, biliary excretion of, in male rats, 149P
- α -methyl practolol, β -adrenoceptor blocking properties of, in the anaesthetized dog, 514
- α -methyl propranolol, β -adrenoceptor blocking properties of, in the anaesthetized dog, 514
- α -methyl-p-tyrosine, effect of on bretylium-induced adrenergic neurone blockade and noradrenaline elevation, 11
- , effect of, on CO₂-induced amnesia in rats, 177P
- α -methyl tyrosine methyl ester, increased biosynthesis of noradrenaline in organ cultured hearts blocked by, 131
- Methysergide**, effect of, on CO₂-induced amnesia in rats, 177P
- Mg⁺⁺**, effect of, on the uptake of 5-HT by human blood platelets, 279
- Microphotometric**, identification of tissue components, 188P
- Microspectographic**, identification of tissue components, 188P
- Mitotic index**, effect of electrical stimulation of sympathetic nerves on the, of rat salivary glands, 186P
- Monoamine histochemistry**, use of model droplets in, and some problems of colour photography, 179P
- Morphine**, effects on heart, 628

- , effect of, on sensitivity of rat anococcygeus muscle, 165P
- , effect on hepatic nerves, 192
- , intestinal and antinociceptive effects, 588
- , offset of, tolerance in rats and mice, 159P
- Muscarine-sensitive receptors**, effect of phenylalkyl- and phenoxyalkyl-trimethylammonium and triethylammonium salts, 480
- Muscarine acetylcholine receptors**, labelled using (³H)-PrBCM, in aneuronal muscle of amniotic membranes of chick embryos, 498
- Myocardium**, effects of dipyrindamole on blood flow and oxygen handling in the acutely ischaemic and normal canine, 391

N

- Naloxone**, effects on heart, 628
- Narcotic analgesics**, effects on heart and adrenergic nerves, 628
- Neostigmine**, role of brain acetylcholine in the pressor response to centrally injected, 557
- Neurones**, the slow calcium-dependent after-hyperpolarization in myenteric neurones with tetrodotoxin-resistant action potentials, 709
- Nicotine**, [³H]-adenine nucleotide and [³H] noradrenaline release evoked by, from the taenia of the guinea-pig caecum, 258
- , nicotine-like effect of phenylalkyl- and phenoxyalkyl-trimethylammonium and triethylammonium salts, 480
- Nigro-striatal function**, possible modulating influence of frontal cortex on, 316
- Nitrazepam**, effect of, on food intake of mice under stress, 146P
- Nitroglycerine**, effects on taenia caecum, 642
- Noradrenaline**, cannabis potentiated reflex vasodilation and direct vasoconstriction induced by, 1
- , effects of bretylium on the subcellular distribution of, in rat heart, 11
- , biosynthesis of, in organ cultured hearts, 131
- , evidence for a pre-junctional α -adrenoceptor through which, is released from adrenergic nerves, 141P
- , effect of sympathomimetic amines on the efflux of, from adrenergic nerves, 142P
- , drug-induced changes in sensitivity to, in rat anococcygeus muscle, 165P
- , relation between concentration of, and its fluorescence intensity and colour of fluorescence, 179P
- , depleted by reserpine, effect on feedback mechanism, 214
- , effects of Δ^9 -THC on subcellular brain levels of, 243
- , a histochemical study of extraneuronal accumulation of, in the guinea-pig trachea, 267
- , effect of (+)-amphetamine on the concentration of, in the striatum of two strains of mice compared, 400
- , inhibition of response of smooth muscle to, and effect of potassium and sodium pump on, 466
- , effects of drugs on the sensitivity of the rat anococcygeus muscle to, 506
- , effect on cardiovascular responses in conjunction with anaesthetics, 565
- , efflux of, from adrenergic nerves in rabbit atria, 614
- , outflow, uptake and overflow in response to accelerans nerves stimulation, 628

- , effects on taenia caecum, 642
- , kinetics of release from micro-pipettes, 667
- , inhibition of release of by lysergic acid diethylamide, 706
- [³H]-noradrenaline**, in taenia caecum, 642
- , release evoked by electrical field stimulation, perivascular nerve stimulation and nicotine from the taenia of the guinea-pig caecum, 258
- Noritriptyline**, comparison of the catecholamine potentiating and anti-cholinergic activity of, 142P
- Notechis scutatus scutatus**, presynaptic and post-synaptic effect of, venom, 340
- Nupercaine**, unchanged responses to, in the denervated diaphragm, 169P

O

- 17- β -oestradiol**, effects of, on the sensitivity of rat anococcygeus muscle to agonists, 506
- Oestrogen**, effect on uterine artery, 595
- Oligomycin**, effect on adenosine uptake by taenia caecum, 642
- Ouabain**, blocking the sodium pump in smooth muscle and its effects on potassium inhibition of agonists noradrenaline and histamine, 466
- , histamine uptake in the heart blocked by toxic dose of, 457
- , inhibitory effect of, on uptake of 5-HT by human blood platelets, 279
- Oxidative phosphorylation inhibitors**, failure to inhibit 5-HT uptake by human blood platelets, 279
- Oxymetazoline**, drug-induced changes in sensitivity to, in rat anococcygeus muscle, 165P
- , the absence of cocaine- and 6-hydroxydopamine-induced supersensitivity to, in the rat anococcygeus muscle, 725

P

- Papaverine**, electrical basis of the mechanical relaxation of rat anococcygeus muscle and the effect of, upon these, 186P
- , effect of, on ganglionic transmission in the superior cervical ganglion of the cat, 407
- , inhibitory effect of maintained in depolarized rat uterus, 445
- , effects on taenia caecum, 642
- Paracetamol**, effect on hepatic nerves, 192
- Paracetamol metabolism**, affected by hepatic and renal damage, 602
- Penicillin**, antagonistic effect of on GABA, 37
- Pentagastrin**, gastric mucosal blood flow during, -stimulated acid secretion in the rat, 534
- Pentagastrin-induced gastric acid secretion**, inhibited by prostaglandins, 428
- Pentobarbitone**, effect of, on food intake of mice under stress, 146P
- , as inhibitor of catecholamine secretion, 205
- , central intolerance to, after pretreatment with barbitone, mechanisms contributing to, 527
- Pentobarbitone anaesthesia**, effect on pressor response to noradrenaline, 565
- Pentolium**, effect on hepatic nerves, 192
- Pepsin**, effect of bombesin on gastric secretion of, 437
- Pethidine**, intestinal and antinociceptive effects, 588
- , effects on heart, 628
- Pharmacokinetics**, the effects of hepatic and renal damage on paracetamol metabolism and excretion following overdosage, 602

- Phenobarbitone sodium**, effect of, on food intake of mice under stress, 146P
- Phenoxyalkyltriethylammonium bromide**, effect on frog rectus and isolated guinea-pig ileum preparations in the presence of hexamethonium; its apparent molal volume at infinite dilution, 480
- Phenoxyalkyltrimethylammonium bromide**, effect on frog rectus and isolated guinea-pig ileum preparations in the presence of hexamethonium; its apparent molal volume at infinite dilution, 480
- Phenoxybenzamine**, activity as inhibitor of 5-HT uptake by human blood platelets, 279
—, effect on adenosine uptake by taenia caecum, 642
- 4-phenyl bicyclo (2,2,2) octan-1-amine**, highly potent inhibitor of uptake of 5-HT by human blood platelets, 279
- Phenylbutazone**, centchroman lower ulcerogenic index than, 64
—, potentiation of dbcAMP-induced gastric acid secretion by, 162P
- Phenyldiguanide**, effect on hepatic nerves, 192
- Phenytoin**, metabolism, inhibition of, by sultiamine, 157P
- Picrotoxin**, antagonistic effect of on GABA, 37
—, antagonism of γ -aminobutyric acid inhibitory responses and synaptic inhibition in the rat substantia nigra, 696
- Polymorph count**, in rats resistant to anaphylactoid reaction-producing agents, 685
- Potassium**, restoration, role of sodium pump in the inhibition of smooth muscle responsiveness to agonists during, 466
- Potassium chloride**, effects of drugs on the sensitivity of the rat anococcygeus muscle to, 506
- Practolol**, assessment of β -adrenoceptor blocking effect, 106
—, influence of urine pH on the renal excretion of, 155P
—, a comparison between tolamolol, and propranolol, 560
- Prenylamine**, activity of, as inhibitor of uptake of 5-HT by human blood platelets, 279
- Procaine**, unchanged responses to, in the denervated diaphragm, 169P
—, effect on hepatic nerves, 192
- Progesterone**, effect of indomethacin on level of, in guinea-pig, 98
- Propane**, correlation of cardiac sensitizing potential with physicochemical properties of, 355
- Propranolol**, inhibitory effect of, on insulin secretion, 145P
—, influence of urine pH on the renal excretion of, 155P
—, effect of, on CO₂-induced amnesia in rats, 177P
—, a comparison between tolamolol, practolol and, 560
- [³H]-Propyl benzilylcholine mustard**, used to label muscarinic acetylcholine receptors in aneuronal muscle of amniotic membranes of chick embryos, 498
- Prostaglandins**, and the mechanism of analgesia produced by aspirin-like drugs, 86
—, release induced by lung stimulation, 226
—, use of hamster stomach *in vitro* as assay preparation for, 662
- Prostaglandin E**, secretion of sympathetic neurotransmitter in guinea-pig vas deferens partly controlled by, 358
- Prostaglandin E₂**, inflammation and pain threshold in rat paw, 183P
—, exogenous, efficiency of control of secretion of sympathetic neurotransmitter by, 358
—, and the bovine sphincter pupillae, 415
- Prostaglandins**, E and F types, effect on atonic sphincter, 415
—, E and A, effects of, on gastric mucosal blood flow and acid secretion in the rat, 428
- Prostaglandin F₂ α** , effect of indomethacin on biosynthesis of, in the guinea-pig, 98
- ### Q
- Quinidine**, unchanged responses to, in the denervated diaphragm, 169P
- ### R
- Rabbit ear**, a method for perfusing the whole, with homologous blood, 184P
- RCS**, release induced by lung stimulation, 226
- Renal damage**, following overdosage, 602
- Reserpine**, decreased synthesis of DNA in regenerating rat liver after the administration of, 253
—, effect of, on sensitivity of rat anococcygeus muscle, 165P
—, effects of, on the sensitivity of rat anococcygeus muscle to agonists, 506
—, effect of Δ^9 -THC on, -induced hypothermia in rats, 243
- Respiratory effects**, cardiovascular and, of cannabis in cat and rat, 1
- Rimiterol**, the pharmacokinetics of, in asthmatic patients, 153P
- RNA**, no decrease of liver, synthesis after administration of reserpine, 253
- ### S
- Salbutamol**, effects of, on physiological tremor in man, 187P
- Salivary glands**, effects of electrical stimulation of the sympathetic nerves on the size and mitotic index of rat, 186P
- SC-19220**, response of atonic sphincter to prostaglandin E₂ antagonised by, 415
- Serum lipid levels**, changes in, induced by metacorticoide hypertension in rats, 146P
- Sodium meclofenamate**, potentiation of dbcAMP-induced gastric acid secretion by, 162P
- Sodium**, pump, the role of, in the inhibition of smooth muscle responsiveness to agonists during potassium restoration, 466
- Sodium salicylate**, examination of the concept that, acts via an active metabolite, 188P
- Sparsomycin**, some liver microsomal effects of, 148P
- Stress**, mild, influence of, on food consumption in untrained mice and the effect of drugs, 146P
- Strychnine**, antagonistic effect of on GABA, 37
—, rhythmical field potentials induced in Inferior Olive Complex by iontophoretically applied, 174P
- Substantia nigra**, role of, in the locomotor stimulant action of amphetamine, 29
- Sultiamine**, inhibition of phenytoin metabolism by, 157P
- Suramin**, effects on plasma proteases, 678
- Suxamethonium**, effect on accumulation of calcium at motor endplates, 168P

—, tetanic and single twitch response of skeletal muscle during repeated injections of, in man, 151P

Sympathetic neurotransmitter, frequency dependence of dual negative feedback control of secretion of, in guinea-pig vas deferens, 358

T

Taenia caecum, [^3H]-adenosine nucleotide and [^3H]-noradrenaline uptake by, 642

Terbutaline, effects of, on physiological tremor in man, 187P

Δ^1 -tetrahydrocannabinol (THC), cardiovascular and respiratory effect of, 1

—, brain levels of and its metabolites in mice tolerant to the hypothermic effect of, 373

Δ^6 -THC, cardiovascular and respiratory effect of, 1

Δ^8 -THC, intestinal and antinociceptive effects, 588

Δ^9 -THC, intestinal and antinociceptive effects, 588

(-)- Δ^9 -tetrahydrocannabinol, effects of, on reserpine induced hypothermia in rats, 243

Tetrachlorodifluoromethane, correlation of cardiac sensitizing potential with physicochemical properties, 355

Tetrahydroisoquinoline (NC-7197), effects of a new, in experimental cardiogenic shock, 554

Tetrodotoxin, electrical basis of the mechanical relaxation of rat anococcygeus muscle and the effect of, upon these, 186P

Theophylline, potentiation of dbcAMP-induced gastric acid secretion by, 162P

Thymidine, reserpine depresses, uptake into DNA, 253

Thymidine kinase, effect of reserpine on uptake of, into DNA in regenerating rat liver, 253

Thymidine 5'-nucleotidase, effect of reserpine on uptake of, into DNA in regenerating rat liver, 253

Thyroid disease, changes in drug metabolizing ability in, 156P

Thyroxine, effect of, on sensitivity of rat anococcygeous muscle, 165P

Tiger snake antivenene, counteracts postsynaptic but not presynaptic effects of TSV 340

Tiger snake, Australian, presynaptic and postsynaptic effects of, venom at the neuromuscular junction, 340

Tissue lipid levels, changes in, induced by corticoid hypertension in rats, 147P

Tolamolol, a comparison between, practolol and propranolol, 560

Tolerance pattern, of anorexigenic action of amphetamine, 658

Trichloroethane, correlation of cardiac sensitizing potential with physicochemical properties of, 355

Trichlorotrifluoroethane, correlations of cardiac sensitizing potential with physicochemical properties of, 355

Trichlorofluoromethane, correlation of cardiac sensitizing potential with physicochemical properties of, 355

Tricyclic antidepressant drugs, dual action of, on responses of single cortical neurones to acetylcholine, 173P

—, effect of on the cardiovascular responses of the rat, 142P

—, activity of, as inhibitor of 5-HT uptake by human blood platelets, 279

Tubocurarine, sleep induced by small doses of, injected into cerebral ventricles of dog, 23

—, effect on accumulation of calcium at motor endplates, 168P

(+)-**tubocurarine**, antagonistic effect of on GABA, 37

—, rhythmical field potentials induced in Inferior Olive Complex by iontophoretically applied, 174P

—, uptake and metabolism of histamine reduced by combining cardiac anaphylaxis and, 457

Tyramine, effect of, on efflux of noradrenaline from adrenergic nerves, 143P

U

UK 6558, assessment of β -adrenoceptor blocking effect, 106

Urethane, effect on pressor response to noradrenaline, 565

Urine pH, influence of, on the renal excretion of practolol and propranolol, 155P

V

Venom, Australian tiger snake, presynaptic and postsynaptic effects of, at the neuromuscular junction, 340

Vinylchloride, correlation of cardiac sensitizing potential with physicochemical properties of, 355

Instructions to Authors

1. **Manuscripts** (2 copies) should be typed in double spacing on one side of paper not larger than foolscap (33×20.5 cm). There should be a separate title page giving the names and addresses of the authors in alphabetical order. A short title containing not more than 40 letters should also be suggested.

2. A **short summary of results and conclusions** (arranged in numbered paragraphs), **tables and legends to figures** should be typed on separate sheets of paper.

3. **References** should be collected at the end of the paper. They should include the authors' names, year of publication, title of article, title of publication (abbreviated in accordance with the fourth edition of the *World List of Scientific Periodicals*), volume number and first and last page numbers. References to books should, in addition, include the names of editors, the edition number, where appropriate, and the town of origin and name of publisher.

4. **Figures** should NOT BE LARGER THAN FOOLSCAP (33×20.5 cm) and may be in the form of original drawings, recorded tracings or high quality photographic prints made from them. Negative prints of kymograph tracings (black on white) should be provided and both ordinates and abscissae should be calibrated.

5. **Lettering** on figures should be inserted in PENCIL. Symbols which are to appear in figures or legends should be chosen from the following:

× + ● ■ ○ □ △ ▲ ▽ ▼ ⊙ ⊖ ◇

6. **Photographs and photomicrographs** should be printed on glossy paper and should be larger than the size required for reproduction.

7. **Tables** ideally should not have more than 84 characters to a line (counting spaces between columns as 4 characters) and certainly not more than 130 characters to a line, unless absolutely unavoidable.

8. An **abstract** of about 100 words suitable for inclusion in *International Abstracts of Biological Sciences* should be typed on a separate sheet, giving the author's name and address and the title of the paper.

General remarks. A recent issue of the journal is a good guide to style. Papers are accepted only if accompanied by a statement that they have not and will not be published in whole or in part in any other Journal.

Two page proofs will be supplied, one of which may be retained by the authors. The other should be corrected immediately and returned to the Press Editor. Corrections should be kept to a minimum.

Twenty-five reprints will be supplied to the authors free of charge. Additional reprints can be purchased. A reprint order form, which should be returned promptly, will be sent out with the proofs. No reprints of abstracts are supplied.

BRITISH JOURNAL OF PHARMACOLOGY

December 1973 Volume 49 Number 4

Page

Systematic Pharmacology

- 565 BREZENOFF, H. E. Cardiovascular responses to noradrenaline in the rat before and after administration of various anaesthetics. (SP1)
 573 BOUSQUET, P. and GUERTZENSTEIN, P. G. Localization of the central cardiovascular action of clonidine. (SP2, SP1)
 580 DOW, R. C., LASZLO, I. and RITCHIE, ISOBEL, M. Cellular localization of the uptake of 5-hydroxytryptamine in the area postrema of the rabbit after injection into a lateral ventricle. (SP2, PK3, DM1)
 588 CHESHER, G. B., EVERINGHAM, M., JACKSON, D. M., MARCHANT-WILLIAMS, H. and STARMER, G. A. The effect of cannabinoids on intestinal motility and their antinociceptive effect in mice. (SP2, DM1)

Autopharmacology

- 595 BELL, C. Oestrogen-induced sensitization of the uterine artery of the guinea-pig to acetylcholine. (SP1, AP1)

Pharmacokinetics

- 602 PRESCOTT, L. F. and WRIGHT, N. The effects of hepatic and renal damage on paracetamol metabolism and excretion following overdosage. A pharmacokinetic study. (PK1, TX, CP)
 614 PATON, D. M. Mechanism of efflux of noradrenaline from adrenergic nerves in rabbit atria. (PK3, AP1)
 628 MONTEL, H. and STARKE, K. Effects of narcotic analgesics and their antagonists on the rabbit isolated heart and its adrenergic nerves. (PK3, AP1, SP1)
 642 KUCHII, M., MIYAHARA, J. T. and SHIBATA, S. [³H]-adenosine nucleotide and [³H]-noradrenaline uptake by cold stored guinea-pig taenia caecum; mechanical effects and release of [³H]-adenosine nucleotide by noradrenaline, papaverine, and nitroglycerine. (PK3)

Drug Mechanisms

- 651 EVANS, M. H. and JAGGARD, PAMELA J. Some effects of dimethyl sulphoxide (DMSO) on the frog neuromuscular junction. (DM1)
 658 GHOSH, M. N. and PARVATHY, S. Tolerance pattern of the anorexigenic action of amphetamine in rats. (DM2, SP2)

Pharmacometrics

- 662 UBATUBA, F. B. The use of the hamster stomach *in vitro* as an assay preparation for prostaglandins. (PM, AP2)
 667 BRADSHAW, C. M., ROBERTS, M. H. T. and SZABADI, E. Kinetics of the release of noradrenaline from micropipettes: interaction between ejecting and retaining currents. (PM)

Miscellaneous

- 678 EISEN, V. and LOVEDAY, C. Effects of suramin on complement, blood clotting, fibrinolysis and kinin formation. (M, AP2)
 688 EISEN, V., FREEMAN, PATRICIA C., LOVEDAY, C. and WEST, G. B. Blood changes in experimental arthritis in two types of genetically different rats. (M, AP2)

SHORT COMMUNICATIONS

- 696 CROSSMAN, A. R., WALKER, R. J. and WOODRUFF, G. N. Picrotoxin antagonism of γ -aminobutyric acid inhibitory responses and synaptic inhibition in the rat substantia nigra. (SP2, DM2)
 699 DHUMAL, V. R. and GULATI, O. D. Effect on body temperature in dogs of perfusion of cerebral ventricles with artificial CSF deficient in calcium or containing excess of sodium or calcium. (SP2)
 702 LARGE, B. J. and WRIGHT, JACQUELINE L. Some actions of sympathomimetic amines and their antagonists on mouse superfused ileum. (AP1, DM2)
 706 HUGHES, J. Inhibition of noradrenaline release by lysergic acid diethylamide. (AP1, PK3)
 709 NORTH, R. A. The calcium-dependent slow, after-hyperpolarization in myenteric plexus neurones with tetrodotoxin-resistant action potentials. (AP1, DM1)
 712 ECCLES, R. and WILSON, H. A kallikrein-like substance in cat nasal secretion. (AP2)
 715 LUNDELL, L. Mobilization of gastric mucosal histamine and gastric secretion after H₂-receptor blockade. (AP2, AP3)
 718 SCHILD, H. O. An effect of calcium on histamine desensitization of guinea-pig ileum. (DM1, DM2, AP2)
 721 BLEIBERG, M. J., JANICKI, B. W. and LEAHY, W. V. C. Effects of a morphine-rabbit anti-morphine antibody mixture on guinea-pig isolated ileum. (DM2, AP2)
 724 RIBEIRO, J. A. and WALKER, J. Action of adenosine triphosphate on endplate potentials recorded from muscle fibres of the rat-diaphragm and frog sartorius. (DM2)
 726 GIBSON, A. and POLLOCK, D. The absence of cocaine- and 6-hydroxydopamine-induced supersensitivity to oxymetazoline in the rat anococcygeus muscle. (DM2)
 728 CHENG, C. P. K., CHENG, K. K. and WANG, J. C. C. Adrenaline-induced acute massive pulmonary oedema in the dog. (TX, SP1)