# Edited for the British Pharmacological Society by

A.W. Cuthbert (Chairman)

A. Ungar (Secretary)

Margaret Day (Press Editor)

J. D. Stephenson (Assistant Press Editor)

A.W. Barrett
G.W. Bisset
T.B. Bolton
D.A. Brown
Julia Buckingham
B.A. Callingham
T.J. Crow
F. de Matteis
V. Eisen
E.W. Gill
A.F. Green
A.R. Green
E.W. Horton
J. Hughes
R. Jones

J.S. Kellv

B.J. Large

G.M. Lees G.P. Lewis I.H.M. Main I. Marshall K. Martin D.F.J. Mason E.K. Matthews T.C. Muir P.A. Nasmyth Winifred G. Navler J.R. Parratt C.D. Richards M. Sandler A.P. Silverman M.A. Simmonds R.A. Webster P. Withrington

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

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

The British Journal of Pharmacology is published monthly by Macmillan Journals Ltd, 4 Little Essex Street, London WC2R 3LF. Telephone: 01-836 6633, ISSN 0007-1188.

Annual subscription UK £57.50; USA & Canada, US \$130; Rest of world, US \$120; Airmail, US \$165 (or equivalent in any other currency). (Orders must be accompanied by remittance. Prices correct at time of publication.)

Cheques should be made payable to Macmillan Journals Limited: Subscription Department, Brunel Road, Basingstoke, Hampshire RG21 2XS, England. Where appropriate, overseas subscribers may make payments into UK Post Office Giro Account No. 519 2455. Full details must accompany the payment.

Enquiries concerning advertising space and rates should be addressed to: Advertisement Department, Macmillan Journals Limited, 4 Little Essex Street, London WC2R 3LF. Telephone: 01-836 6633.

Copyright © 1978 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.

Second class postage paid at New York, N.Y. US Mailing Agent: Expeditors of the Printed Word, Inc., Suite 1217, 527 Madison Avenue, New York, NY 10022.

# **INDEX TO VOLUME 64**

# **AUTHOR INDEX**

- ADAMS, R.N., CONTI, J., MARSDEN, C.A. & STROPE, ELAINE Measurement of dopamine and 5-hydroxytryptamine release in CNS of freely moving unanaesthetized rats, 470P
- ADAMS, S.S. see HENMAN, F.D., 426P
- ADEOSHUN, I.O., HEALY, T.E.J. & PATRICK, J.M. (introduced by BIRMINGHAM, A.T.) Ventilatory patterns in surgical patients premedicated with lorezepam or diazepam, 458P
- ADVENIER, C., BOISSIER, J.R., HO, S., MALLARD, B. & RUFF, F. Effects of pentobarbitone and urethane on pulmonary airways resistance in guinea-pigs and their interactions with drugs, 519
- AL-DEEN, I.H.S. & SHAW, G.G. Assay of picomole quantities of polyamines by high pressure ion-exchange chromatography, 465P
- ANDERSON, SUSAN D. & ROBERTS, P.J. Amino acidinduced stimulation of [3H]-dopamine release from rat striatum in vitro, 429P
- ANDREWS, C.D., DAVIS, A., FREEMAN, H.S., McDERMED, J.D., POAT, JUDITH A. & WOODRUFF, G.N. Effects of (+)- and (-)-enantiomers of 2-amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene on dopamine receptors and on dopamine uptake, 433P
- ANDREWS, C.D. & WOODRUFF, G.N. Effect of (+)- and (-)-enantiomers of sulpiride on ADTN-induced hyperactivity in rat, 434P
- ANGEL, A. & DEWHURST, D.G. Pharmacological investigation of electrically evoked convulsive activity induced by administration of catechol in anaesthetized rat, 539
- ANNING, ELIZABETH N., O'DONNELL, STELLA R. & WAN-STALL, JANET C. Study on potassium-depolarized tracheal chain preparations from guinea-pigs, 421P
- ARBILLA, SONIA & LANGER, S.Z. Differences between presynaptic and postsynaptic α-adrenoceptors in isolated nictitating membranes of cat: effects of metanephrine and tolazoline, 259

- BACK, D.J., BRECKENRIDGE, A.M., CROSS, K.J., ORME, M.L.'E., PERCIVAL, A. & ROWE, P.H. Reduction of enterohepatic circulation of norethisterone by antibiotics in rat, 401P
- BAIRD, A.W. & MAIN, I.H.M. Characterization of acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- BAKHLE, Y.S. Clinically used dves are inhibitors of prostaglandin E2 inactivation in rat isolated lung, 386P
- BALLS, M. & HOLMES, C.H. (introduced by BENNETT, T.A.) An indirect effect of isoprenaline on α-amylase release by amphibian pancreas organ cultures, 472P

- BARNETT, D.B., BATTA, MOUSHIRA I. & NAHORSKI, S.R., Development of a radioreceptor assay for  $\beta$ -adrenoceptor antagonists in plasma, 449P
- BAXTER, M.G., MILLER, A.A. & WHEATLEY, P.L. Dexamphetamine-induced EEG arousal in rats: a possible new test model for potential antischizophrenic agents, 410P
- BELL, C. & STUBBS, A. Localization of vasodilator dopamine receptors in canine hindlimb, 253
- BENEDICT, C.R., FILLENZ, M. & STANFORD, CLARE Changes in plasma noradenaline concentration as a measure of release rate, 305
- BENNET, T. see EVANS, D.F., 475P
- BENNETT, T. see HARDY, J.G., 468P
- BENNETT, T. see IBU, J.O., 469P
- BENNETT, T. see KNAPP, M.S., 476P
- BENNETT, T. see KABLER, TRICIA A., 427P
- BENNETT, T. see PATRICK, J.M., 454P BENNETT, T. see STRANGE, P.G., 450P
- BENNETT, T. A. see BALLS, M., 472P
- BENNETT, T. & GARDINER, SHEILA M. Corticosteroid involvement in changes in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129
- BERKOWITZ, B.A. & HEAD, R.J. Adrenal origin of plasma catecholamines after decapitation: a study in normal and diabetic rats, 3
- BERRIDGE, T.L. (introduced by LEACH, G.D.H.) A method for injecting drugs into nucleus tractus solitarii of conscious rats, 465P
- BERRY, P.A. see CRAMPTON, E.L., 405P
- BEVAN, D.R., CALDWELL, J., D'SOUZA, J. & SMITH, R.L. Influence of impaired renal function on disposition of [14C]-fazadinium in anaesthetized greyhound, 402P
- BHATTA, MOUSHIRA I. see BARNETT, D.B., 449P
- BIRMINGHAM, A.T. see ADEOSHUN, I.O., 458P
- BIRMINGHAM, A.T. see BRINDLEY, D.N., 377P
- BIRMINGHAM, A.T. see COVE-SMITH, J.R., 457P
- BIRMINGHAM, A.T. see GOODEN, B.A., 414P
- BIRMINGHAM, A.T. see HAGGARD, M.P., 476P
- BIRMINGHAM, A.T. see HUSAIN, A., 455P
- BIRMINGHAM, A.T. see JECQUIER, ANNE M., 456P
- BIRMINGHAM, A.T. see KNAPP, M.S., 453P
- BIRMINGHAM, A.T. see YATES, D.B., 397P
- BLACKBURN, K.J., BREMNER, R.M., GREENGRASS, P.M. & MORVILLE, M. (introduced by DAVEY, M.J.) Selective affinities of bromocriptine and lergotrile for rat limbic dopamine binding sites, 413P
- BLACKWELL, G.J., FLOWER, R.J., RUSSELL-SMITH, N., SALMON, J.A., THOROGOOD, P.B. & VANE, J.R. 1-n-Butylimidazole: a potent and selective inhibitor of thromboxane synthetase, 435P
- BLACKWELL, G.J., FLOWER, R.J., RUSSELL-SMITH, N., SALMON, J.A., THOROGOOD, P.B. & VANE, J.R. Prostacyclin is produced in whole blood, 436P
- BOISSIER, J.R. see ADVENIER, C., 519

- BORN, GUSTAV V.R. & KOVACS, IREN B. Inhibition by N-acetyl neuramic acid of platelet thrombogenesis induced by laser injury to rat and hamster venules, 301
- BRANCH, ROBERT A., COLE, EDWARD, HORTH, CHARLES E., JACKSON, LYNNE, RAMSAY, LARRY E. & SHELTON, JOHN Influence of sodium and potassium supplements on diuretic responses to frusemide administration in normal subjects, 285
- BRECKENRIDGE, A.M. see BACK, D.J., 401P
- BRECKENRIDGE, A.M., LECK, JACQUELINE B., PARK, B.K., SERLIN, M.J. & WILSON, A. Mechanisms of action of anticoagulants warfarin, 2-chloro-3-phytylnaphtho-quinone, acenocoumarol, brodifacoum and difenacoum in rabbit. 399P
- BREMNER, R.M., see BLACKBURN, K.J., 413P
- BRIMBLECOMBE, R.W. see KNIGHT, R.I., 404P
- BRIMBLECOMBE, R.W. see KNIGHT, R.I., 460P
- BRINDLEY, D.N., PRITCHARD, P.H. & STURTON, R.G. (introduced by BIRMINGHAM, A.T.) Mechanism by which fenfluramine and benfluorex could inhibit synthesis of triacylglycerols, 377P
- BROADLEY, K.J. & NICHOLSON, C.D. Estimation of dissociation constants and relative efficacies of isoprenaline, or ciprenaline and terbutaline in guinea-pig isolated atria by use of functional antagonism, 420P
- BROADLEY, K.J. & WILSON, C. Biphasic inotropic response of guinea-pig isolated atria to histamine receptor agonists, 387P
- BROWN, D.H., BRUIN, J., LEWIS, A.J., McNEILLIE, A. & SMITH, W.E. Effect of gold salts in kaolin-induced paw oedema and adjuvant-induced arthritis in rat, 462P
- BROWN, K.A. & COLLINS, A.J. In vitro effects of non-steroidal anti-inflammatory drugs on human polymorphonuclear cells and lymphocyte migration, 347
- BROWNLEE, G. see KALARIA, R.N., 409P
- BRUIN, J. see BROWN, D.H., 462P
- BUCKLEY, G.A., DAVIES, L.G. & SPINDLEY, D.T. A bee counter for monitoring bee activity and behaviour, 475P
- BUCKLEY, G.A., GODDEN, D.H. & PARRISH, S.K. Motor output to flight muscles and inhibition of acetylcholinesterase after injection of dimethoate into locusts, 446P
- BUNCE, K.T., HONEY, A.C. & PARSON, M.E. Calcium dependence of basal and secretagogue-induced acid secretion in isolated rat stomach, 424P
- BURNS, J.W. & DOE, J.E. Comparison of drug-induced responses on rat tracheal, bronchial and lung strip in vitro preparations, 71
- BURNSTOCK, G., COCKS, T. & CROWE, RAHIMA Evidence for purinergic innervation of anococcygeus muscle, 13
  - С
- CALDWELL, J. see BEVAN, D.R., 402P
- CANFIELD, S.P., CURWAIN, B.P. & PRICE, CAROLYN  $\beta$ -Adrenoceptor agonist stimulation of acid secretion in rat isolated stomach, 425P
- CARPENTER, F.G. Potentiation of nerve-induced bladder responses by tetraethylammonium in relation to junctional and extrajunctional muscarinic receptors, 331

- CARTER, C.J. & PYCOCK, C.J. Lesions of frontal cortex of rat: changes in neurotransmitter systems in subcortical regions, 430P
- CATERSON, ROBYN J., DUGGIN, GEOFFREY G., HOR-VATH, JOHN, MOHANDAS, JANARDANAN & TILLER, DAVID Aspirin, protein transacetylation and inhibition of prostaglandin synthetase in kidney, 353
- CHANCE, ELIZABETH & TOMLINSON, D.R. Effect of acute adrenergic neurone blockade on response of cardiovascular system of rabbit to lower body negative pressure, 443P
- CHANCE, ELIZABETH & TOMLINSON, D.R. Response of cardiovascular system to lower body negative pressure in rabbits treated with 6-hydroxydopamine, 396P
- CHERNECKI, W., DAS, P.K., DHALLA, N.S. & SHARMA, G.P. Cardiovascular effects of acebutalol following coronary artery occlusion and reperfusion in anaesthetized dog, 265
- CLAY, T.P. & HUGHES, J.M.B. (introduced by REID, J.L.) Evidence for a vagosympathetic bronchodilator reflex initiated by prostaglandin F<sub>2x</sub>, 422P
- CLIPSHAM, PATRICIA J., HAMILTON, T.C., HUNT, A.A.E. & POYSER, R.H. Cyclic nucleotides and central cardiovascular control in cat, 395P
- CLOW, A., JENNER, P. & MARSDEN, C.D. Supersensitivity of cerebral dopamine receptors during ongoing chronic (six months) administration of trifluoperazine to rats, 414P
- COCKS, T. see BURNSTOCK, G., 13
- COLE, EDWARD see BRANCH, ROBERT A., 285
- COLLINS, A.J. see BROWN, K.A., 347
- CONTI, J. see ADAMS, R.N., 470P
- CONWAY, J. see SCOTT, EVELYN M., 394P
- COOKE, S. (introduced by CROSSLAND, J.) Effect of shortand long-term administration of some anticonvulsant drugs on folate content of rat brain, 407P
- COOLING, M.J. & SIM, M.F. Effects of prostaglandin synthetase inhibition on natriuresis induced by diuretics and sodium loading in rat, 439P
- COOPER, MARIE & WYLLIE, J.H. Some properties of 5-hydroxytryptamine receptors in hindquarters of rat, 389P
- COOPER, S.J. & FRANCIS, R.L. Feeding parameters in the rat: interactions of chlordiazepoxide with (+)-amphetamine or fenfluramine, 378P
- COSTALL, B. see NAYLOR, R.J., 461P
- COSTALL, B., HUI, S.-C.G. & NAYLOR, R.J. Modulation of amphetamine hyperactivity by DPI injected into rat nucleus acumbens, 461P
- COSTAIN, D.W. & GREEN, A.R. β-Adrenoceptor antagonists inhibit behavioural responses of rats to increased brain 5-hydroxytryptamine, 193
- COVE-SMITH, J.R., KNAPP, MARTIN S. & POWNALL, R. (introduced by BIRMINGHAM, A.T.) Time of steroid therapy, 457P
- COWIE, A. LOUISE, KOSTERLITZ H.W. & WATERFIELD, ANGELA A. Factors influencing release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- CRAMPTON, E.L., DICKINSON, W., HARAN, G., MAR-CHANT, B. & RISDALL, P.C. (introduced by BERRY, P.A.) Metabolism of dotheipin hydrochloride in vivo and in vitro, 405P

- CROCKER, ANN D., WALKER, R. & WILSON, K.A. Prostaglandins and contractile action of bradykinin on longitudinal muscle of rat isolated ileum, 441P
- CROSS, A.J. & WADDINGTON, J.L. (introduced by CROW. T.J.) Drug effects in a GABA-dependent rotational behaviour model and on [3H]-GABA receptor binding: studies with anantiomers of baclofen HCl, 380P

CROSS, K.J. see BACK, D.J., 401P

CROSSLAND, J. see COOKE, S., 407P

CROSSLAND, J. see DAVIS, S.S., 444P

CROSSLAND, J. see ELHWUEGI, A., 407P

CROSSMAN, A.R., LEE, L.A. & SLATER, P. Effects of intrapallidal administration of convulsant drugs on headturning evoked by striatal stimulation in rats, 381P

CROW, T.J. see CROSS, A.J., 380P

CROWE, RAHINA see BURNSTOCK, G., 13

CURWAIN, B.P. see CANFIELD, S.P., 425P

D

DALY, M.J., LONG, JANET M. & STABLES, R. Role of  $\beta_1$ and  $\beta_2$ -adrenoceptors in inhibition of gastric acid secretion in dog, 153

DAS, P.K. see CHERNECKI, W., 265

DAVEY, M.J. see BLACKBURN, K.J., 413P

DAVIES, L.G. see BUCKLEY, G.A., 475P

DAVIS, A. see ANDREWS, C.D., 433P

- DAVIS, S.S., TOMLINSON, E., WILSON, C.G. (introduced by CROSSLAND, J.) Effect of ion-association on transcorneal transport of drugs, 444P
- DAVIDSON, E.M., FORD-HUTCHINSON, A.W., SMITH, M.J.H. & WALKER, J.R. Prostacyclin: a potential mediator of inflammation, 437P
- DAY, M.D., HUSAIN, A. & JONES, C.W. Changes in plasma renin levels of normotensive and spontaneously hypertensive rats with increasing age, 392P
- DAY, M.D. & SEMPIK, J. Effect of centrally administered noradrenaline and isoprenaline on splanchnic nerve activity in anaesthetized and conscious cats, 393P
- DE JONG, W. & NIJKAMP, F.P. An inhibitory role for adrenals in cardiovascular effects of propranolol in spontaneously hypertensive rat, 391P
- DEAKIN, J.F.W. & GREEN, A.R. Effects of putative 5-hydroxytryptamine antagonists on behaviour produced by administration of tranyleypromine and L-tryptophan or tranyleypromine and L-DOPA to rats, 201
- DEAN, H.G. & INGHAM, S. Effect of SQ 14225 on fluid intake in DOCA/salt hypertensive rats, 390P
- DEHPOUR, A.R., HOSSEINZADEH, K. & KHOYI, M.A. (introduced by MICHAEL, F.) Effect of methoxamine on outflow of [3H]-noradrenaline from rat vas deferens, 418P
- DEHPOUR, A.R., KHOYI, M.A., KOUTCHEKI, H. & ZARRIN-DAST, M.R. Pharmacological study of anococcygeus muscle of dog, 452P

DEWHURST, D.G. see ANGEL, A., 539

DHALLA, N.S. see CHERNECKI, W., 265

DICKINSON, W. see CRAMPTON, E.L., 405P

DIX, C.J. & JORDAN, V.C. Contrasting subcellular responses to monohydroxytamoxifen and oestradiol benzoate in immature rat uterus, 375P

- DOCHERTY, J.R. & McGRATH, J.C. Sympathomimetic effects of pancuronium bromide on cardiovascular system of pithed rat: a comparison with effects of drugs blocking neuronal uptake of noradrenaline, 589
- DOCHERTY, J.R. & McGRATH, J.C. Time-course of pre- and post-junctional effects of clonidine in pithed rat, 419P DOE, J.E. see BURNS, J.W., 71
- DREW, G.M. Pharmacological characterization of presynaptic α-adrenoceptors regulating cholinergic activity in guinea-pig ileum, 293

D'SOUZA, J. see BEVAN, D.R., 402P

DUGGIN, GEOFFREY G. see CATERSON, ROBYN J., 353 DUSTING, G.J., MONCADA, S. & VANE, J.R. Recirculation of prostacyclin (PGI<sub>2</sub>) in dog, 315

E

- ECCLESTON, D. & NICOLAOU, N. Influence of L-tryptophan and monoamine oxidase inhibitors on catecholamine metabolism in rat brain, 341
- EDVINSSON, L. & HARDEBO, J.E. Demonstration of 5-hvdroxytryptamine receptors through inhibition by methergoline in cat pial arteries in vitro, 281
- ELHWUEGI, A. (introduced by CROSSLAND, J.) Antiepileptic drugs and monoamine metabolism in brain, 407P
- ENDOH, M., SHIMIZU, T. & YANAGISAWA, T. Characterization of adrenoceptors mediating positive inotropic responses on ventricular myocardium of dog, 53
- ENGBERG, I., FLATMAN, J.A. & LAMBERT, J.D.C. Action of N-methyl-D-aspartic and kainic acids on motoneurones with emphasis on conductance changes, 384P
- ENGBERG, I., FLATMAN, J.A. & LAMBERT, J.D.C. Extracellular and intracellular recording during micro-iontophoresis: an appraisal, 451P
- ENGINEER, DINAZ M., MORRIS, H.R., PIPER, PRISCILLA J. & SIROIS, P. Release of prostaglandins and thromboxanes from guinea-pig lung by slow reacting substance of anaphylaxis, and its inhibition, 211
- EVANS, O.F., FOSTER, G.E., HARDCASTLE, J.D., JOHNSON, F. & WRIGHT, J. (introduced by BENNETT, T.) Effect of glucagon on canine duodenum and small intestine. 475P
- EVANS, R.H. & WATKINS, J.C. Do primary afferent terminals have acidic amino acid receptors?, 385P

FADLOUN, Z. & LEACH, G.D.H. Measurements of noradrenaline overflow and dopamine-β-hydroxylase activity in superfused preparations, 464P

FIBIGER, HANS C. & MASON, STEPHEN T. Effects of dorsal bundle injections of 5-hydroxydopamine on avoidance responding in rats, 601

FILLENZ, M. see BENEDICT, C.R., 305

FLATMAN, J.A. see ENGBERG, I., 384P

FLATMAN, J. see ENGBERG, I., 451P

FLETCHER, J.R. & RAMWELL, P.W. E. coli endotoxin shock in dog: treatment with lidocaine or indomethacin, 185 FLOWER, R.J. see BLACKWELL, G.J., 435P

FLOWER, R.J. see BLACKWELL, G.J., 436P

FORD-HUTCHINSON, A.W. see DAVIDSON, E.M., 437P

FOSTER, G.E. see EVANS, D.F., 475P

FRANCIS, R.L. see COOPER, S.J., 378P

FREDHOLM, BERTIL B. & HEDQVIST, PER Release of [3H]-purines from [3H]-adenine labelled rabbit kidney following sympathetic nerve stimulation, and its inhibition by α-adrenoceptor blockade, 239

FREEMAN, H.S. see ANDREWS, C.D., 433P

FRENCH, A.M. & SCOTT, N.C. Antiarrhythmic effects of a benzotriazinium salt in mice and guinea-pigs, 398P

FRENS, J., VAN MIERT, A.S.J.P.A.M. & VAN DUIN, C.TH.M. (introduced by SCHONBAUM, E.) Prostaglandins are not essential in experimental fever of rats, 439P

G

GAGNON, G., REGOLI, D. & RIOUX, F. A new bioassay for glucagon, 99

GANGULY, D.K., NATH, D.N., ROSS, H.-G. & VEDASIRO-MONI, J.R. Rat isolated phrenic nerve-diaphragm preparation for pharmacological study of muscle spindle afferent activity: effect of oxotremorine, 47

GARDINER, SHEILA M. see BENNETT, T., 129

GENT, J.R. & NORMANTON, J.R. Actions of γ-acetylenic GABA on single central neurones in rat, 383P

GILBERT, J.C. & KIRKWOOD, S. Glial cell function and GABA-feedback hypothesis, 382P

GILBERT, J.C., LAMBIE, A.T. & OSORE, H. Effects of aldosterone and spironolactone on renal ATPase activities, 408P

GODDEN, D.H. see BUCKLEY, G.A., 446P

GOFF, D., MILLER, A.A. & WEBSTER, R.A. Anticonvulsant drugs and folic acid on development of epileptic kindling in rats, 406P

GOODEN, B.A. (introduced by BIRMINGHAM, A.T.) Comparison in vitro of response of mesenteric arterial vasculature from duckling and chicken to nervous stimulation and noradrenaline, 414P

GORDON, J.L. & PEARSON, J.D. Effects of sulphinpyrazone and aspirin on prostaglandin I<sub>2</sub> (prostacyclin) synthesis by endothelial cells, 481

GRAY, J.M.B., HENRY, D.A., LAWSON, D.H. & TILSTONE, W.J. (introduced by LONGMAN, H.J.S. Continuous infusion of frusemide in refractory oedema, 453P

GREEN, A.R. see COSTAIN, D.W., 193 GREEN, A.R. see DEAKIN, J.F.W., 201

GREEN, A.K. SEE DEAKIN, J.F.W., 201

GREENGRASS, P. M. see BLACKBURN, K.J., 413P

GRIFFITH, OLWEN R., MARSHALL, I. & NASMYTH, P.A. Blockade of presynaptic  $\alpha$ -adrenoceptors by metiamide, 416P

GULATI, O.D. & PANCHAL, D.I. Some observations on development of adrenergic innervation in rabbit intestine, 247

н

HAGGARD, M.P. (introduced by BIRMINGHAM, A.T.) Menstrual fluctuations in hearing-suggestions for hormone and drug monitoring methods in man, 476P HAMILTON, T.C. see CLIPSHAM, PATRICIA, J., 395P HARAN, G. see CRAMPTON, E.L., 405P HARDCASTLE, J.D. see EVANS, D.F., 475F HARDEBO, J.E. see EDVINSSON, L., 281

HARDY, J.G., LEESON, MICHELE & WILSON, C.G. (introduced by BENNETT, T.) Use of gamma cameras to measure disposition and fate of iodide in rabbit, 468P

HAYASHI, SHIGEHIRO & TODA, NOBORU, Age-related changes in response of rabbit isolated aortae to vasoactive agents, 229

HEAD, R.J. see BERKOWITZ, B.A., 3

HEALY, T.E.J. see ADEOSHUN, I.O., 458P

HEAVEY, D.J. & REID, J.L. Effect of SQ14225 on baroreceptor reflex sensitivity in conscious normotensive rabbits, 389P

HEDOVIST, PER see FREDHOLM, BERTIL B., 239

HENMAN, F.D. (introduced by ADAMS, S.S.) Mucosal cell turnover in upper gut of mouse and its modification by carbenoxolone, 426P

HENRY, D.A. see GRAY, J.M.B., 453P

HICKS, T.P. & McLENNAN, H. Comparison of actions of octopamine and catecholamines on single neurones of rat cerebral cortex, 485

HILL, R.G. & PAPPER, CHRISTINE M. Selective effects of morphine on nociceptive responses of thalamic neurones in rat, 137

HIMORI, N. & TAIRA, N. Pharmacological analysis of histamine receptors in musculature and vasculature of dog trachea in situ, 553

HO, S. see ADVENIER, C., 519

HOLMES, C.H. see BALLS, M., 472P

HONEY, A.C. see BRUCE, K.T., 424P

HOPE, WENDY, McCULLOCH, MARION W., RAND, M.J. & STORY, D.F. Modulation of noradrenergic transmission in rabbit ear artery by dopamine, 527

HORTH, CHARLES E. see BRANCH, ROBERT A., 285

HORVATH, JOHN see CATERSON, ROBYN J., 353

HOSOTANI, T. & MISU, Y. Further evidence for prevention by guanethidine of noradrenaline efflux from rabbit ventricular slices induced by a low external sodium concentration, 163

HOSOTANI, T. & MISU, Y. Prevention by guanethidine analogues of output of noradrenaline induced by sodium reduction in rabbit ventricular slices, 37

HOSSEINZADEH, K. see DEHPOUR, A.R., 418P

HOULT, J.R.S. & MOORE, P.K. Sulphasalazine is a potent inhibitor of prostaglandin 15-hydroxydehydrogenase: possible basis for therapeutic action in ulcerative colitis, 6

HOWLETT, D.R. & NAHORSKI, S.R. Effect of acute and chronic amphetamine administration on  $\beta$ -adrenoceptors and dopamine receptors in rat corpus striatum and limbic forebrain, 411P

HUI, S.-C.G. see COSTALL, B., 461P

HUIDOBRO, F. Antidiuretic effect of morphine in the rat: tolerance and physical dependence, 167

HUNT, A.A.E. see CLIPSHAM, PATRICIA J., 395P

HUSAIN, A. see DAY, M.D., 392P

HUSAIN, A. & JOHNSON, I.R. (introduced by BIRMING-HAM, A.T.) A simple microassay for human tissue renin, 455P

IBU, J.O., MACDONALD, I.A. & SHORT, A.H. (introduced by BENNETT, T.) Technique for measuring first pass extraction in rat perfused liver, 469P ILLES, P. & THESLEFF, S. 4-Aminopyridine and evoked transmitter release from motor nerve endings, 623

IMPICCIATORE, M. Occurrence of H<sub>1</sub>- and H<sub>2</sub>-histamine receptors in guinea-pig gall bladder in situ, 219

IMRIE, P.R., MARLEY, E. & THOMAS, D.V. Metabolism and distribution of exogenous histamine in cats, 109 INGHAM, S. see DEAN, S.G., 390P

ITO, YUSHI, KURIYAMA, HIROSI & SUZUKI, HIKARU Effects of diltiazem (CRD-401) on membrane and mechanical properties of vascular smooth muscles of rabbit, 503

JACOB, J.J.C. & RAMABADRAN, K. Enhancement of a nociceptive reaction by opioid antagonists in mice, 91

JACKSON, A.R. & TOMLINSON, D.R. An analysis of response of perfused vas deferens of rat to field stimulation, 467P

JACKSON, LYNNE see BRANCH, ROBERT A., 285

JARROTT, B. & SUMMERS, R. J. Localization of [3H]-clonidine binding in guinea-pig kidney, 418P

JEQUIER, ANNE M. & POGMORE, J.R. (introduced by BIRMINGHAM, A.T.) Plasma sex hormone binding globulin and oestrogen therapy, 456P

JENNER, P. see CLOW, A., 414P

JENNER, P., MARSDEN, C.D., PRATT, J. & REYNOLDS, E.H. Altered serotoninergic activity in mouse brain induced by clonazepam, 432P

JOHNSON, F. see EVANS, D.F., 475P

JOHNSON, I.R. see HUSAIN, A., 455P

JONES, C.W. see DAY, M.D., 392P

JORDAN, V.C. see DIX, C.J., 375P

JORDAN, V.C. & NAYLOR, K.E. Antitumour activity of tamoxifen and mono-hydroxytamoxifen: a comparative study in rat, 376P

Κ

KABLER, TRICIA A., KNAPP, M.S. & POWNALL, R. (introduced by BENNETT, T.) Effects of corticosteroids given at various clock times on cell-mediated immunity to oxazolone, 427P

KALARIA, R.N., PRINCE, A.K. & WONG, P.T.-H. (introduced by BROWNLEE, G.) Choline uptake and regulation of choline acetyltransferase in relation to neuronal activity, 409P

KALSNER, STANLEY Mechanisms of inactivation of noradrenaline in iris sphincter, tracheal muscle and facial artery of cattle: implications for  $\beta$ -adrenoceptormediated responses, 545

KAMIKAWA, YUICHIRO & SHIMO, YASUO Antagonistic effect of compound 48/80 on inhibitory actions of morphine- and methionine-enkephalin on electrically induced contractions of guinea-pig ileum, 511

KENAWY, SANAA A., LEWIS, G.P. & WILLIAMS, T.J. Effects of  $\alpha$ - and  $\beta$ -adrenoceptor agonists on inflammatory exudation in rabbit and guinea-pig skin, 447P

KERWIN, K. & PYCOCK, C. Specific stimulation of [3H]-dopamine release from dendrites of rat substantia. nigra by glycine, 428P

KHOYI, M.A. see DEHPOUR, A.R., 418P

KHOYI, M.A. see DEHPOUR, A.R., 452P

KING, B. & MARSDEN, C.D. Monitoring motor activity using doppler shift radar, 471P

KIRBY, MARILYN J., PLEECE, S.A. & REDFERN, P.H. Effect of fenfluramine on obesity in rats—a new method for screening of potential antiobesity agents, 442P

KIRKWOOD, S. see GILBERT, J.C., 382P

KNAPP, MARTIN S. see COVE-SMITH, J.R., 457P

KNAPP, M.S. see KABLER, TRICIA A., 427P

KNAPP, M.S., KOWANKO, INGEBORG, MAHONEY, P.G.C., POWNALL, R. & SWANNELL, A.J. (introduced by BIRM-INGHAM, A.T.) A domiciliary study of urinary circadian rhythms in rheumatoid patients with particular reference to effects of time of administration of corticosteroid drugs, 453P

KNAPP, M.S. & WOOLFSON, A.M.J. (introduced by BEN-NETT, T.) Effect of drug therapy on circadian variations in blood pressure and influence of timing of therapy, 476P

KNIGHT, R.I. & SMITH, I.R. (introduced by BRIMBLE-COMBE, R.W.) Metabolism in vivo and in vitro of radiolabelled histamine and telemethylhistamine in rat brain. 404P

KNIGHT, R.I. & SMITH I.R. (introduced by BRIMBLE-COMBE, R.W.) Separation and quantification of metabolites of radiolabelled histamine in brain, 460P

KOSTERLITZ, H.W. see COWIE, A. LOUISE, 565

KOSTERLITZ, H.W. & LESLIE, FRANCES M. Comparison of receptor binding characteristics of opiate agonists interacting with  $\mu$ - or  $\kappa$ -receptors, 607

KOUTCHEKI, H. see DEHPOUR, A.R., 452P

KOVACS, IREN B. see BORN, GUSTAV V.R., 301

KOWANKO, INGEBORG see KNAPP, M.S., 453P

KURIYAMA, HIROSI see ITO, YUSHI, 503

KURIYAMA, HIROSI & SUZUKI, HIKARU Effects of acetylcholine on membrane and contractile properties of smooth muscle cells of rabbit superior mesenteric artery, 493

L

LAMBERT, J.D.C. see ENGBERG, I., 384P

LAMBERT, J.D.C. see ENGBERG, I., 451P LAMBIE, A.T. seé GILBERT, J.C., 408P

LANGER, S.Z. see ARBILLA, SONIA, 259

LAWSON, D.H. see GRAY, J.M.B., 453P

LEACH, G.D.H. see BERRIDGE, T.L., 465P

LEACH, G.D.H., see FADLOUN, Z., 464P

LECK, JACQUELINE B. see BRECKENRIDGE, A.M., 399P

LEE, L.A. see CROSSMAN, A.R., 381P

LEESON, MICHELE, see HARDY, J.G., 468P

LEMAIRE, SIMON, MAGNAN, JACQUES & REGOLI, DOMENICO Rat vas deferens: a specific bioassay for endogenous opioid peptides, 327

LEONARD, B.E. see MORINAN, A., 379P

LESLIE, FRANCES M. see KOSTERLITZ, H.W., 607

LEWIS, A.J. see BROWN, D.H., 462P

LEWIS, G.P. see KENAWY, SANAA A., 447P

LEWIS, G.P. & MANGHAM, BEVERLEY A. Changes in blood flow and mediator content of rabbit skin grafts, 123

LINSCHEER, WILLEM G. & RAHEJA, KRISHAN L. Effects of somatostatin on gastric acid secretion and on lipid and carbohydrate metabolism in rat, 311

LIVINGSTON, A. & WATERMAN, A.E. Development of tolerance to ketamine in rats and the significance of hepatic metabolism. 63

LIVINGSTON, A. & WATERMAN, A.E. Urinary excretion of ketamine and its metabolites in rat, 401P

LONG, JANET M. see DALY, M.J., 153 LONGMAN, H.J.S. see GRAY, J.M.B., 452P

### м

MAGMAN, JACQUES see LEMAIRE, SIMON, 327 MAHONEY, P.G.C. see KNAPP, M.S., 453P MAIN, I.H.M. see BAIRD, A.W., 445P

MAIN, I.H.M. & PEARCE, J.B. Differential inhibition by PGE<sub>1</sub>, PGE<sub>2</sub> and endoperoxide analogue U46619 of secretion from rat isolated gastric mucosa stimulated by histamine, pentagastrin and methacholine, 423P

MAIN, I.H.M. & PEARCE, J.B. Effects of calcium on acid secretion from rat isolated gastric mucosa during stimulation with histamine, pentagastrin, methacholine and dibutyryl cyclic adenosine 3',5'-monophosphate, 359

MALLARD, B. see ADVENIER, C., 519 MANGHAM, BEVERLEY A. see LEWIS, G.P., 123

MARCHANT, B. see CRAMPTON, E.L., 405P

MARLEY, E. see IMRIE, P.R., 109
MARSDEN, C.D. Involvement of 5-hydroxytryptamine and dopamine in behavioural effects of α-methyltryptamine, 431P

MARSDEN, C.D. see ADAMS, R.N., 470P

MARSDEN, C.D. see CLOW, A., 414P

MARSDEN, C.D. see JENNER, P., 432P MARSDEN, C.D. see KING, B., 471P

MARSHALL, I. see GRIFFITH, OLWEN R., 416P

MARSHALL, I., NASMYTH, P.A. & SHEPPERSON, N.B. Effect of exogenous noradrenaline on overflow of [3H]-noradrenaline from mouse vas deferens, 417P

MARSHALL, I., NASMYTH, P.A. & SHEPPERSON, N.B. Effects of release and depletion of endogenous nor-adrenaline on transmission of impulses in mouse vas deferens, 145

MASON, STEPHEN T. see FIBIGER, HANS C., 601

MAUGER, JEAN-PIERRE, MOURA, ANNE-MARIE & WOR-CEL, MANUEL Pharmacology of the adrenoceptors and cholinoceptors of the BC<sub>3</sub>H1 nonfusing muscle cell line, 29

McCulloch, Marion W. see Hope, Wendy, 527

McDERMID, J.D. see ANDREWS, C.D., 433P

MACDONALD, I.A. see IBU, J.O., 469P

McGRATH, J.C. see DOCHERTY, J.R., 419P

McGRATH, J.C. see DOCHERTY, J.R., 589

McGRATH, J.C. & OLVERMAN, H.J. Release of [<sup>3</sup>H]-noradrenaline from motor adrenergic nerves of anococcygeus muscle by lysergic acid diethylamide, tyramine or nerve stimulation, 615

McKIRDY, H.C. & MUIR, T.C. An investigation of role of ganglia in innervation of rat anococcygeus muscle: an electrical and mechanical study, 173

MCLENNAN, H. see HICKS, T.P., 485

McNEILLIE, A. see BROWN, D.H., 462P

MENNINI, TIZIANA, PATACCINI, R. & SAMANIN, R. Effects of narcotic analgesics on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75 MESSIHA, F.S. Antidepressant action of caesium chloride and its modification of chlorpromazine toxicity in mice,

MICHAL, F. see DEHPOUR, A.R., 418P MILLER, A.A. see BAXTER, M.G., 410P MILLER, A.A. see GOFF, D., 406P MISU, Y. see HOSOTANI, T., 37

MISU, Y. see HOSOTANI, T., 163

MOHANDAS, JANARDANAN see CATERSON, ROBYN J., 353

MONCADA, S. see DUSTING, G.J., 315

MOORE, P.K. see HOULT, J.R.S., 6

MORINAN, A. & LEONARD, B.E. Social isolation in young rat: neurochemical effects of treatment with a long-acting neuroleptic, α-flupenthixol decanoate, 379P MORRIS, H.R. see ENGINEER, DINAZ M., 211

MORVILLE, M. see BLACKBURN, K.J., 413P

MOURA, ANNE-MARIE see MAUGER, JEAN-PIERRE, 29 MUIR. T.C. see McKIRDY, H.C., 173

### N

NAHORSKI, S.R. see BARNETT, D.B., 449P NAHORSKI, S.R. see HOWLETT, D.R., 411P NASMYTH, P.A. see GRIFFITH, OLWEN R., 416P NASMYTH, P.A. see MARSHALL, I., 145 NASMYTH, P.A. see MARSHALL, I., 417P NATH, D.N. see GANGULY, D.K., 47 NAYLOR, K.E. see JORDAN, V.C., 376P NICHOLSON, C.D. see BROADLEY, K.J., 420P NICOLAOU, N. see ECCLESTON, D., 341 NIJKAMP, F.P. see DE JONG W., 391P NORMANTON, J.R. see GENT, J.R., 383P

### 0

O'DONNELL, STELLA R. see ANNING, ELIZABETH N., 421 P

ODUMOSU, A. & WILSON, C.W.M. Vitamin C and cholesterol-lowering effect of lofibrate, 477P

OLVERMAN, H.J. see McGRATH, J.C., 615

ORME, M.L.'E. see BACK, D.J., 401P

OSORE, H. see GILBERT, J.C., 408P

OWEN, BRENDA, E. & TABERNER, P.V. Studies on interaction between chloral hydrate and ethanol, 400P

### D

PANCHAL, D.I. see GULATI, O.D., 247
PARK, B.K. see BRECKENRIDGE, A.M., 399P
PARKINSON, R. (introduced by SIM, M.F.) Carotid artery loop puncture: a convenient technique for direct blood pressure measurement in conscious dog, 473P

PARRISH, S.K. see BUCKLEY, G.A., 446P
PARRY, M. & WOOD, R.G. (introduced by SIM, M.F.) A digital plateau detecting rate meter, 474P
PARSONS, M.E. see BRUCE, K.T., 424P
PATACCINI, R. see MENNINI, TIZIANA, 75
PATRICK, J.M. see ADEOSHUN, I.O., 458P
PATRICK, J.M. & SEMPIK, ANNE K. (introduced by BENNETT, T.) Effect of diazepam on threshold of the ventilatory response to CO<sub>2</sub>, 454P
PEARCE, J.B. see MAIN, I.H.M., 359
PEARCE, J.B. see MAIN, I.H.M., 423P
PEARSON, J.D. see GORDON, J.L., 481
PEPPER, CHRISTINE M. see HILL, R.G., 137
PERCIVAL, A. see BACK, D.J., 401P

PHAILY, S. & SENIOR, JUDITH Histamine involvement in regulation of uterine blood flow in rat, 387P

PICKFORD, L. MARY Effect of adrenoceptor and ganglion blocking agents on *in situ* uterus of anaesthetized rat, 44P

PIPER, PRISCILLA J. see ENGINEER, DINAZ M., 211 PLEECE, S.A. see KIRBY, MARILYN, J., 442P

PLOMP, GERDA J.J. & VAN REE, JAN M. Adrenocorticotrophic hormone fragments mimic effect of morphine in vitro, 223

POAT, JUDITH A. see ANDREWS, C.D., 433P POGMORE, J.R. see JECQUIER, ANNE M., 456P POWNALL, R. see COVE-SMITH, J.R., 457P POWNALL, R. see KABLER, TRICIA A., 427P POWNALL, R. see KNAPP, M.S., 453P POYSER, R.H. see CLIPSHAM, PATRICIA J., 395P PRATT, J. see JENNER, P., 432P PRICE, CAROLYN see CANFIELD, S.P., 425P PRINCE, A.K. see KALARIA, R.N., 409P PRITCHARD, P.H. see BRINDLEY, D.N., 377P PYCOCK, C.J. see CARTER, C.J., 430P PYCOCK, C. see KERWIN, K., 428P

# R RAHEJA, KRISHAN L. see LINSCHEER, WILLEM L., 311

RAMABADRAN, K. see JACOB, J.J.C., 91 RAMSAY, LARRY E. see BRANCH, ROBERT A., 285 RAMWELL, P.W. see FLETCHER, J.R., 185 RAND, M.J. see HOPE, WENDY, 527 REDFERN, P.H. see KIRBY, MARILYN J., 442P REGOLI, D. see GAGNON, G., 99 REGOLI, DOMENICO see LEMAIRE, SIMON, 327 REID, J. see HEAVEY, D.J., 389P REYNOLDS, E.H. see JENNER, P., 432P RICHARDSON, P.D.I. & WITHRINGTON, P.G. Responses of simultaneously perfused hepatic arterial and portal venous vascular beds of dog to histamine and 5-hydroxytryptamine, 581 RIOUX, F. see GAGNON, G., 99 RISDALL, P.C. see CRAMPTON, E.L., 405P ROBERTS, P.J. see ANDERSON, SUSAN D., 429P ROSS, H.-G. see GANGULY, D.K., 47 ROWE, P.H. see BACK, D.J., 401P RUFF, F. see ADVENIER, C., 519 RUSSELL-SMITH, N. see BLACKWELL, G.J., 435P RUSSELL-SMITH, N. see BLACKWELL, G.J., 436P

s

SALMON, J.A. see BLACKWELL, G.J., 435P
SALMON, J.A. see BLACKWELL, G.J., 436P
SCHONBAUM, E. see FRENS, J., 439P
SCOTT, EVELYN M. (introduced by CONWAY, J.) Effect of atenolol on discharge of sympathetic efferent nerves in anaesthetized cat, 394P
SCOTT, N.C. see FRENCH, A.M., 398P
SEMPIK, ANNE K. see PATRICK, J.M., 454P

SEMPIK, J. see DAY, M.D., 393P SENIOR, JUDITH see PHAILY, S., 387P

SAMANIN, R. see MENNINI, TIZIANA, 75

SERLIN, M.J. see BRECKENRIDGE, A.M., 399P

SEMPIK, J. & WILSON, J. Cerebral perfusion in dog, 463P SERLIN, M.J. see BRECKENRIDGE, A.M., 399P

SHARMA, G.P. see CHERNECKI, W., 265

SHARPE, G.F., SHORT, A.H. & TOMLINSON, D.R. Novel modification of isolated perfused heart preparation, 466P

SHAW, G.G. see AL-DEEN, I.H.S., 465P SHELTON, JOHN see BRANCH, ROBERT A., 285 SHEPPERSON, N.B. see MARSHALL, I., 145 SHEPPERSON, N.B. see MARSHALL, I., 417P SHIMIZU, T. see ENDOH, M., 53 SHIMO, YASUO see KAMIKAWA, YUICHIRO, 511 SHORT, A.H. see IBU, J.O., 469P SHORT, A.H. see SHARPE, G.F., 466P

SIM, M.F. see COOLING, M.J., 439P SIM, M.F. see PARKINSON, R., 473P

SIM, M.F. see PARRY, M., 474P

SIROIS, P. see ENGINEER, DINAZ M., 211

SKELDON, N. & STEELE, L. Effects of different particulate stimuli on extracellular release of prostaglandins and lysosomal enzymes from mouse peritoneal macrophages in vitro, 448P

SLATER, P. see CROSSMAN, A.R., 381P SMITH, I.R. see KNIGHT, R.I., 404P SMITH, I.R. see KNIGHT, R.I., 460P SMITH, M.J.H. see DAVIDSON, E.M., 437P SMITH, R.L., see BEVAN, D.R., 402P SMITH, W.E. see BROWN, D.H., 462P SPINDLEY, D.T. see BUCKLEY, G.A., 475P STABLES, R. see DALY, M.J., 153

STANDEN, N.B. Postnatal development of adrenoceptor responses to agonists and electrical stimulation in rat isolated atria, 83

STANFORD, CLARE see BENEDICT, C.R., 305 STEELE, L. see SKELDON, N., 448P

STONE, TREVOR W. & TAYLOR, DAVID A. Antagonism by clonidine of neuronal depressant responses to adenosine, adenosine 5'-monophosphate and adenosine triphosphate, 369

STORY, D.F. see HOPE, WENDY, 527

STRANGE, P.G. (introduced by BENNETT, T.) Effect of a phosphodiesterase inhibitor on cyclic GMP changes induced by muscarinic agonists on mouse neuroblastoma cells, 450P

STROPE, ELAINE see ADAMS, R.N., 470P STUBBS, A. see BELL, C., 253 STURTON, R.G. see BRINDLEY, D.N., 377P SUMMERS, R.J. see JARROTT, B., 418P SUZUKI, HIKARU see ITO, YUSHI, 503 SUZUKI, HIKARU see KURIYAMA, HIROSI, 493 SWANNELL, AJ. see KNAPP, M.S., 453P

T

TABERNER, P.V. see OWEN, BRENDA E., 400P
TAIRA, N. see HIMORI, N., 553
TAYLOR, DAVID A. see STONE, TREVOR W., 369
THESLEFF, S. see ILLES, P., 623
THOMAS, D.V. see IMRIE, P.R., 109
THOROGOOD, P.B. see BLACKWELL, G.J., 435P
THOROGOOD, P.B. see BLACKWELL, G.J., 436P
TILLER, DAVID see CATERSON, ROBYN J., 353
TILSTONE, W.J. see GRAY, J.M.B., 452P
TODA, NOBORU see HAYASHI, SHIGEHIRO, 229
TOMLINSON, D.R. see CHANCE, ELIZABETH, 396P
TOMLINSON, D.R. see CHANCE, ELIZABETH, 443P
TOMLINSON, D.R. see JACKSON, A.R., 467P
TOMLINSON, D.R. see SHARPE, G.F., 466P

### ν

VAN DUIN, C.Th.M. see FRENS, J., 439P VAN MIERT, A.S.J.P.A.M. see FRENS, J., 439P VAN REE, JAN M. see PLOMP, GERDA, J.J., 223 VANE, J.R. see BLACKWELL, G.J., 435P VANE, J.R. see BLACKWELL, G.J., 436P VANE, J.R. see DUSTING, G.J., 315 VEDASIROMONI. J.R. see GANGULY, D.K., 47

### w

WADDINGTON, J.L. see CROSS, A.J., 380P WALKER, J.R. see DAVIDSON, E.M., 437P WALKER, R. see CROCKER, ANN D., 441P WANSTALL, JANET C., see ANNING, ELIZABETH N., 421P WATERFIELD, ANGELA A. see COWIE, A. LOUISE, 565 WATERMAN, A.E. see LIVINGSTON, A., 63 WATERMAN, A.E. see LIVINGSTON, A., 401P WEBSTER, R.A. see GOFF, D., 406P WENNMALM, AKE Effects of nicotine on cardiac prostaglandin and platelet thromboxane synthesis, 559 WHALLEY, E.T. Action of bradykinin and oxytocin on isolated whole uterus and myometrium of rat in oestrus, WHEATLEY, P.L. see BAXTER, M.G., 410P WHITTLE, B.J.R. Inhibition of prostacyclin (PGI<sub>2</sub>) formation in rat small intestine and gastric mucosa by the ulcerogen, indomethacin, 438P WILLIAMS, T.J. see KENAWY, SANAA A., 447P WILSON, A. see BRECKENRIDGE, A.M., 399P WILSON, C. see BROADLEY, K.J., 387P WILSON, C.G. see DAVIS, S.S., 444P WILSON, C.G. see HARDY, J.G., 468P WILSON, C.W.M. see ODUMOSU, A., 477P WILSON, J. see SEMPIK, J., 463P WILSON, K.A. see CROCKER, ANN D., 441P WITHRINGTON, P.G. see RICHARDSON, P.D.I., 581 WOOD, R.G. see PARRY, M., 474P WOODRUFF, G.N. see ANDREWS, C.D., 433P WOODRUFF, G.N. see ANDREWS, C.D., 434P WONG, P.T.-H. see KALARIA, R.N., 409P WOOLFSON, A.M.J. see KNAPP, M.S., 476P WORCEL, MANUEL see MAUGER, JEAN-PIERRE, 29 WRAAE, O. Pharmacokinetics of lithium in brain, cerebrospinal fluid and serum of rat, 273 WRIGHT, J. see EVANS, D.F., 475P WYLLIE, J.H. see COOPER, MARIE, 389P

WATKINS, J.C. see EVANS, R.H., 385P

### ١

YANAGISAWA, T. see ENDOH, M., 53
YATES, D.B. (introduced by BIRMINGHAM, A.T.) Changes in blood pressure, cardiac output and rate, and the response to lower body negative pressure in trypanosome-infected rabbits, 397P

Z

ZARRINDAST, M.R. see DEHPOUR, A.R., 452P

# SUBJECT INDEX

Α

- **Acebutalol,** cardiovascular effects of, following coronary artery occlusion and reperfusion in anaesthetized dog, 265
- (+)-Acebutalol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rats, 193
- Acenocoumarol, mechanism of action of, in rabbit, 399P Acetazolamide, effect of indomethacin on natriuresis induced by, in rat, 439P
- Acetylcholine, effect of a phosphodiesterase inhibitor on cyclic GMP changes induced by, in mouse neuroblastoma cells, 450P
- , role of, in response to electrical stimulation of periarterial nerves to rabbit ileum, 247
- , acid secretion induced by, in rat isolated stomach, calcium dependence of, 424P
- -, effect of, on anococcygeus muscle of dog. 452P
- effects of, on membrane and contractile properties of smooth muscle cells of rabbit superior mesenteric artery, 493
- effect of, on effects of pentobarbitone and urethane on pulmonary airways resistance in guinea-pigs, 519
- factors influencing release of, from myenteric plexus of ileum of guinea-pig and rabbit, 565
- —, effect of, on blood flow and intraluminal pressure in blood-perfused trachea of dog *in situ*, 553
- -, effect of, on rabbit renal artery, 102
- —, effect of, on muscle spindle afferent activity of rat isolated phrenic nerve-diaphragm preparation, 47
- —, effect of, on rat isolated whole uterus and myometrium, during oestrus, 21
- excitation of nucleus lateralis neurones by, effect of morphine on, in rat, 137
- Acetylcholinesterase, inhibition of, and motor output to flight muscles, after injection of dimethoate into locusts, 446P
- γ-Acetylenic γ-aminobutyric acid, actions of, on single central neurones in rat, 383P
- N-acetyl neuramic acid, inhibition by, of platelet thrombogenesis induced by laser injury to rat and hamster venules, 301
- (+)-Acetyl-β-methylcholine, effect of a phosphodiesterase inhibitor on cyclic GMP changes induced by, in mouse neuroblastoma cells, 450P
- [<sup>3</sup>H]-adenine, rabbit kidney labelled with, release of <sup>3</sup>H-purines from, following sympathetic nerve stimulation, and its inhibition by α-adrenoceptor blockade, 239
- Adenosine, effect of, on release of <sup>3</sup>H-purines from [<sup>3</sup>H]-adenine labelled rabbit kidney following sympathetic nerve stimulation, 239
- —, effect of, on rabbit renal artery, 102
- , antagonism by clonidine of neuronal depressant responses to, in rat cerebral cortex, 369
- Adenosine 3',5'-monophosphate, cyclic role of, in central cardiovascular control in cat, 395P
- -, effect of, on rabbit renal artery, 102
- Adenosine monophosphate, cyclic, generation of, use of to study effect of amphetamine on dopamine receptors and  $\beta$ -adrenoceptors in rat corpus striatum and limbic forebrain, 411P

- Adenosine 5'-monophosphate, antagonism by clonidine of neuronal depressant responses to, in rat cerebral cortex, 369
- Adenosine diphosphate, effect of, on rabbit renal artery, 102 Adenosine triphosphate, effect of, on rabbit renal artery, 102
- , antagonism by clonidine of neuronal depressant responses to, in rat cerebral cortex, 369
- inhibitory action of, on electrically induced contractions of guinea-pig ileum, effect of compound 48/80 on, 511
- Adenosine 5'-triphosphate, release of, from stimulation of non-adrenergic, non-cholinergic, inhibitory nerves of rat and rabbit anococcygeus muscle, 13
- Adenosine triphosphatase, Na<sup>+</sup>, K<sup>+</sup>-, activity of, in rat kidney microsomal fraction, effects of aldosterone and spironolactone on, 408P
- Na<sup>+</sup>, K<sup>+</sup>-, activity of, in glial cells of rats, and the GABA-feedback hypothesis, 382P
- Adenylate cyclase activity, striatal, effect of trifluoperazine on, in rats, 414P
- Adrenal glands, weight of, as a measure of assessing corticosteroid involvement in noradrenergic responsiveness of tissues taken from rats made hypertensive by short-term isolation, 129
- , inhibitory role for, in cardiovascular effects of propranolol in spontaneously hypertensive rat, 391P
- Adrenal origin, of plasma catecholamines after decapitation: a study in normal and diabetic rats, 3
- Adrenaline, level of, in blood, effect of decapitation on, in normal and diabetic rats, 3
- , inhibitory action of, on electrically induced contractions of guinea-pig ileum, effect of compound 48/80 on, 511
- —, effect of, on rabbit renal artery, 102
- effect of, on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- —, effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- Adrenergic innervation, some observations on development of, in rabbit intestine, 247
- Adrenergic nerves, motor, of rat anococcygeus muscle, release of [3H]-noradrenaline from, by lysergic acid diethylamide, tyramine or nerve stimulation, 615
- Adrenergic neurone blockade, acute, effects of, on response of cardiovascular system of rabbit to lower body negative pressure, 443P
- $\alpha$  and  $\beta$ -adrenoceptor agonists, effects of, on inflammatory exudation in rabbit and guinea-pig skin, 447P
- β-Adrenoceptor agonist, stimulation by, of acid secretion in rat isolated stomach, 425P
- β-Adrenoceptor antagonists, development of a radioreceptor assay for, in plasma, 449P
- inhibit behavioural responses of rats to increased brain 5-hydroxytryptamine, 193
- α-Adrenoceptor blockade, inhibition of release of <sup>3</sup>H-purines from [<sup>3</sup>H]-adenine labelled rabbit kidney following sympathetic nerve stimulation, 239

- β-Adrenoceptor blockade, induced by propranolol, bronchoconstricting action of intravenous prostaglandin F<sub>2x</sub> after, in guinea-pig, 422P
- Adrenoceptor blocking agents, effects of, on in situ uterus of anaesthetized rat, 444P
- effects of, on responses evoked by electrical stimulation of muscles of forelimb of anaesthetized rat induced to convulse by catechol administration, 539
- Adrenoceptors, of BC<sub>3</sub>H1 nonfusing muscle cell line, pharmacology of, 29
- characterization of, mediating positive inotropic responses in ventricular myocardium of dog. 53
- responses of, to agonists and electrical stimulation, postnatal development of, in rat isolated atria, 83
- α-Adrenoceptors, role of, in binding of [<sup>3</sup>H]-clonidine in guinea-pig kidney, 418P
- pharmacological characterization of presynaptic, regulating cholinergic activity in guinea-pig ileum, 293
- —, in isolated rabbit aortae, role of, in age-related changes in response of, to vasoactive agents, 229
- presynaptic and postsynaptic, differences between, in isolated cat nictitating membranes, effects of metanephrine and tolazoline on, 259
- role of, in inhibition by tyramine of twitch responses of mouse vas deferens to field stimulation, 145
- presynaptic, blockade of, by metiamide, in mouse vas deferens, 416P
- β-Adrenoceptors, effects of acute and chronic administration of amphetamine on, in rat corpus striatum and limbic forebrain, 411P
- responses mediated by, in cattle, implications of mechanisms of inactivation of noradrenaline in iris sphincter, tracheal muscle and facial artery for, 545
- $\beta_1$  and  $\beta_2$ -adrenoceptors, role of, in inhibition of gastric acid secretion in dog, 153
- Adrenocortical activity, as a measure of assessing involvement in changes in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129
- Adrenocorticotrophic hormone, fragments of, mimic effect of morphine in vitro, 223
- Age, effect of, on changes in plasma renin levels of normotensive and spontaneously hypertensive rats, 392P
- changes related to, in response of rabbit isolated aortae to vasoactive agents, 229
- β-Alanine, effect of, on effect of glycine on release of [<sup>3</sup>H]-dopamine from dendrites of rat substantia nigra,
- Alcohol dehydrogenase, mammalian liver, use of, to study interaction between ethanol and chloral hydrate in mice. 400P
- Aldosterone, effect of, on renal ATPase activities, 408P
- (+)-Alprenolol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rat produced by transleypromine, 193
- Amiloride, effect of indomethacin on natriuresis induced by, in rat, 439P
- Amino acid, stimulation of [3H]-dopamine release from rat striatum in vitro induced by, 429P
- Amino acid receptors, acidic, do primary afferent terminals have, 385P
- γ-Aminobutyric acid, receptor binding, drug effects on, studies with enantiomers of baclofen HCl, 380P

- --, -dependent rotational behaviour model, drug effects in, studies with enantiomers of baclofen HCl. 380P , response of rat cerebral cortex neurones to, effect of
- in rat brain, effect of α-flupenthixol decanoate on.
   379P
- ---, feedback hypothesis, and glial cell function, 382P

clonidine on, 369

- , γ-acetylenic, actions of, on single central neurones in rat, 383P
- , effect of, on effect of glycine on release of [<sup>3</sup>H]-dopamine from dendrites of rat substantia nigra, 428P
- , effect of lesions of frontal cortex of rat on level of, in subcortical regions, 430P
- [<sup>3</sup>H]-γ-Aminobutyric acid, release of, from dendrites of rat substantia nigra, effect of glycine on, 428P
- γ-Aminobutyric acid antagonists, effects of intrapallidal administration of, on head-turning evoked by striatal stimulation in rats. 381P
- γ-Aminobutyric acid transaminase, effect of γ-acetylenic γ-aminobutyric acid on, in single central neurones of rat. 383P
- 2-Amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene, hyperactivity in rat induced by, effects of (+)- and (-)-enantiomers of sulpiride on, 434P
- -, (+)- and (-)-enantiomers of, effects of, on dopamine receptors and dopamine uptake in rat striatum, 433P
- **2-(2-Aminoethyl)thiazole**, mimics contracturant action of histamine on guinea-pig gall bladder *in situ*. 219
- **β-Aminoglutarate**, effect of, on release of [<sup>3</sup>H]-dopamine from rat striatum *in vitro*, 429P
- 2-Amino-4-phosphonobutyric acid, effect of, on effect of glutamate on release of [3H]-dopamine from rat striatum in vitro, 429P
- **Aminophylline**, comparison of responses to, on rat tracheal, bronchial and lung strips *in vitro*, 71
- 4-Aminopyridine, and evoked transmitter release from frog motor nerve endings, 623
- **Amphetamine**, enhancement of motility produced by, in mice, effect of caesium chloride on, 9
- , effects of acute and chronic administration of, on β-adrenoceptors and dopamine receptors in rat corpus striatum and limbic forebrain, 411P
- , hyperactivity produced by, modulation of, by DPI injected into rat nucleus accumbens, 461P
- (+)-Amphetamine, interaction of, with chlordiazepoxide in rat feeding. 378P
- Ampicillin, effect of, on enterohepatic circulation of norethisterone in rat, 401P
- α-Amylase, release of, by amphibian pancreas organ cultures, an indirect effect of isoprenaline on, 472P
- Analgesics, narcotic, effects of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75
- **Anaphylaxis,** slow reacting substance of, release of prostaglandins and thromboxanes from guinea-pig lung by, and its inhibition, 211
- Angiotensin I, pressor response to, in conscious normotensive rabbits, effect of SO14225 on, 389P
- **Angiotensin II,** pressor action of, in conscious normotensive rabbits, effect of SQ 14225 on, 389P
- , effect of, on release of [<sup>3</sup>H]-purines from [<sup>3</sup>H]adenine labelled rabbit kidney following sympathetic nerve stimulation, 239

- —, 8-leu, effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- Anococcygeus muscle, rat, an investigation of role of ganglia in innervation of, an electrical and mechanical study, 173
- evidence for purinergic innervation of, in rat and rabbit, 13
- —, of dog, pharmacological study of, 452P
- rat, motor adrenergic nerves of, release of [<sup>3</sup>H]-noradrenaline from, by lysergic acid diethylamide, tyramine or nerve stimulation, 615
- Antiarrhythmic effects, of a benzotriazinium salt in mice and guinea-pigs, 398P
- Antibiotics, reduction of enterohepatic circulation of norethisterone by, in rat, 401P
- Anticholinesterase agents, effects of, on responses evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechol administration, 539
- Anticoagulants, mechanisms of action of, in rabbit, 399P Anticonvulsant drugs, and folic acid on development of epileptic kindling in rats, 406P
- —, effect of short- and long-term administration of some, on folate content of rat brain, 407P
- , altered serotoninergic activity in mouse brain induced by, 432P
- Antidepressant action, of caesium chloride and its modification of chlorpromazine toxicity in mice, 9
- Antidiuretic effect, of morphine in rat, tolerance and physical dependence of, 167
- Antiepileptic drugs, and monoamine metabolism in rat brain, 407P
- Antiepileptic effects, of some anticonvulsant drugs, in rats, 407P
- -, of anticonvulsant drugs, in rats, 406P
- Antihistamine, effect of, on vasodilatation possibly caused by histamine in rabbit skin grafts. 123
- Antihistaminics, pretreatment with, effect of, on effect of compound 48/80 on inhibitory actions of morphine-and methionine-enkephalin on electrically induced contractions of guinea-pig ileum, 511
- Anti-inflammatory drugs, non-steroidal, in vitro effects of, on human polymorphonuclear cells and lymphocyte migration, 347
- Antiobesity agents, potential a new method for screening in rat. 442P
- Antischizophrenic agents, potential, dexamphetamineinduced EEG arousal in rats as a possible new test model for, 410P
- Antitumour activity, of tamoxifen compared with monohydroxytamoxifen in rat, 376P
- Aorta, rabbit isolated, age-related changes in response of, to vasoactive agents, 229
- Arachidonic acid, role of, during experimental fever of rats, 439P
- Arecoline, effect of a phosphodiesterase inhibitor on cyclic GMP changes induced by, in mouse neuroblastoma cells. 450P
- Arginine, effect of, on release of [3H]-dopamine from rat striatum in vitro, 429P
- Arthritis, adjuvant-induced, effect of gold salts on, in rat, 462P
- -, rheumatoid, patients with, a domiciliary study of uri-

- nary circadian rhythms in, with particular reference to effects of time of administration of corticosteroid drugs, 453P
- Arylsulphatase, effect of, on release of prostaglandins and thromboxanes from guinea-pig lung by slow reacting substance of anaphylaxis, 211
- Asbestos, effect of, on extracellular release of prostaglandins and lysosomal enzymes from mouse peritoneal macrophages in vitro, 448P
- L-Aspartate, effect of, on [3H]-dopamine release from rat striatum in vitro, 429P
- Asphyxia, water, role of intense vasoconstriction in peripheral vascular beds, including the mesentery, in oxygen-conserving mechanism during, 415P
- Aspirin, protein transacetylation and inhibition of prostaglandin synthetase in mouse and rabbit kidney, 353
- in vitro effects of, on human polymorphonuclear cells and lymphocyte migration, 347
- effects of, on prostaglandin I<sub>2</sub> (prostacyclin) synthesis by endothelial cells, 481
- , effect of, on effects of prostaglandins on contractile action of bradykinin on longitudinal muscle of rat isolated ileum, 441P
- Atenolol, effect of, on discharge of sympathetic efferent nerves in anaesthetized cat, 394P
- —, effect of, on circadian variations in blood pressure, and influence of timing of therapy, 476P
- (+)-Atenolol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rats, 193
- Atria, spontaneously beating, and electrically, driven taken from rats made hypertensive by short-term isolation, response of, to noradrenaline and noradrenergic nerve stimulation, corticosteroid involvement in changes in, 129
- —, guinea-pig isolated, estimation of dissociation constants and relative efficacies of isoprenaline, orciprenaline and terbutaline in, by use of functional antagonism, 420P
- rat isolated, postnatal development of adrenoceptor responses to agonists and electrical stimulation in, 83
- guinea-pig, biphasic inotropic response to histamine receptor agonists, 387P
- Atropine, effect of, on responses evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechol administration, 539
- —, effect of, on response of nerve plexus of rat anococcygeus muscle to extrinsic nerve stimulation, 173
- effect of, on relaxation in response of rat and rabbit anococcygeus muscle to field stimulation produced by guanethidine, 13
- —, effect of, on action of carbachol on efflux of <sup>42</sup>K and <sup>86</sup>Rb from tissue cultures of BC<sub>3</sub>H1 nonfusing muscle cell line, 29
- , effect of, on muscle spindle afferent activity of rat isolated phrenic nerve-diaphragm preparation, 47
- effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- —, effect of, on responses of rat bladder to tetraethylammonium, 331
- effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- effect of, on modulation of amphetamine hyperactivity by DPI injected into rat nucleus accumbens, 461P

- —, effect of, on anococcygeus muscle of dog, 452P
- effect of, on stimulation of acid secretion in rat isolated stomach by β-adrenoceptor agonists, 425P

Aurothioglucose, effect of, on adjuvant-induced arthritis and kaolin-induced paw oedema in rat, 462P

Aurothiomalate, effect of, on kaolin-induced paw oedema and adjuvant-induced arthritis in rat, 462P

Autografts, rabbit skin, blood flow changes in, and correlation with presence of vasoactive agents in homogenates of the grafts, 123

Avoidance response, in rats, effects of dorsal bundle injections of 6-hydroxydopamine on, 601

Azathioprine, therapy with, time of, 457P

В

Baclofen hydrochloride, enantiomers of, studies with, on drug effects in a GABA-dependent rotational behaviour model and on [3H]-GABA receptor binding, 380P

Barium, effect of, on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623

Barium chloride, effect of, on release of [3H]-noradrenaline from motor adrenergic nerves of rat anococcygeus muscle by, 615

BC<sub>3</sub>H1, a nonfusing muscle cell line, pharmacology of adrenoceptors and cholinoceptors of, 29

Baroreceptor reflex sensitivity, effect of SQ14225 on, in conscious normotensive rabbits, 389P

Bee counter, for monitoring bee activity and behaviour, 475P

Behaviour, produced by administration of tranylcypromine and L-tryptophan or tranylcypromine and L-DOPA in rats, 201

Behavioural effects, of α-methyltryptamine in rat, involvement of 5-hydroxytryptamine and dopamine in, 431P

Behavioural responses, of rats to increased brain 5-hydroxytryptamine,  $\beta$ -adrenoceptor antagonists inhibit, 193

Bendrofluazide, effect of indomethacin on natriuresis induced by, in rat, 439P

Benfluorex, mechanism by which, could inhibit synthesis of triacylglycerols, 377P

Bicuculline, effect of intrapallidal administration of, on head-turning evoked by striatal stimulation in rats, 381P

Betamethasone, effect of, on release of thromboxanes and prostaglandins from guinea-pig lung by slow reacting substance of anaphylaxis, 211

Benzotriazinium salt, antiarrhythmic effects of a, in mice and guinea-pigs, 398P

Benzodiazepines, ventilatory patterns in surgical patients premedicated with, 458P

Bile, lipid composition of, in rat, effect of somatostatin

**Binding characteristics,** receptor, comparison of, of opiate agonists interacting with  $\mu$ - or  $\kappa$ -receptors, 607

**Bladder**, nerve-induced responses of, potentiation of, by tetraethylammonium in relation to junctional and extra junctional muscarinic receptors, 331

**Blood,** metabolism and distribution of exogenous histamine in, in cats, 109

-, whole, prostacyclin is produced in, 436P

- **Blood flow,** changes in, and mediator content of rabbit skin grafts, 123
- -. in blood-perfused trachea of dog *in situ*, effects of dimaprit, histamine and acetylcholine on, 553
- —, uterine, regulation of, in rat, histamine involvement in. 387P

**Blood pressure**, effect of acebutalol on, in anaesthetized dog following coronary artery occlusion and reperfusion, 265

- , arterial, fall in, after administration of endotoxin, effects of lidocaine or indomethacin on, in dog, 185
- effect of acute adrenergic neurone blockade on response of, of rabbit to lower body negative pressure, 443P
- during spontaneous hypertension in rat, inhibitory role for adrenals in cardiovascular effects of propranolol, 391P
- , changes in, of normotensive, and spontaneously hypertensive rats with increasing age, 392P
- —, during DOCA/salt hypertension in rats, effect of SQ 14225, 390P
- effect of SQ 14225 on, in conscious normotensive rabbits, 389P
- -, effect of atenolol on, in anaesthetized cat, 394P
- in rabbit treated with 6-hydroxydopamine, effect of application of pressure to hindquarters on, 396P
- changes in, and the response to lower body negative pressure in trypanosome-infected rabbits, 397P
- —, effect of drug therapy of circadian variations in, and influence of timing of therapy, 476P
- direct measurement of, in conscious dog, carotid artery loop puncture as a convenient technique for, 473P

Botulinum toxin, effect of, on responses of rat bladder to tetraethylammonium, 331

**Bradycardia,** produced by acebutalol in anaesthetized dog following coronary artery occlusion and reperfusion, 265

Bradykinin, contractile action of, on longitudinal muscle of rat isolated ileum, effects of prostaglandins on, 441P

- action of, on isolated whole uterus and myometrium of rat in oestrus, 21
- -, effect of, on rabbit renal artery, 102
- depressor response to, in conscious normotensive rabbits, effect of SQ14225 on, 389P

Brain, rat, dopamine receptors and  $\beta$ -adrenoceptors in, effects of acute and chronic administration of amphetamine on, 411P

- —, rat, pharmacokinetics of lithium in, 273
- —, increased concentrations of 5-hydroxytryptamine, β-adrenoceptor antagonists inhibit behavioural responses of rats to, 193
- rat, influence of L-tryptophan and monoamine oxidase inhibitors on catecholamine metabolism in, 341
- rat, metabolism in vivo and in vitro of radiolabelled histamine and telemethylhistamine in, 404P
- mouse, altered serotoninergic activity in, induced by clonazepam, 432P

Bretylium, effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565

 effect of, on response of cardiovascular system of rabbit to lower body negative pressure, 443P

- Bretylium tosylate, effect of, on response of cardiovascular system to lower body negative pressure in rabbits treated with 6-hydroxydopamine, 396P
- British Pharmacological Society, Proceedings of, 13-15 September, University of Nottingham, 375-477P
- —, Proceedings of, Guildford, 29-31 March, 1978, 477P **Brodifacoum,** mechanism of action of, in rabbit, 399P
- Bromcresol green, is an inhibitor of prostaglandin E<sub>2</sub> inactivation in rat isolated lung, 386P
- **Bromocriptine**, selective affinity of, for rat limbic dopamine binding sites, 413P
- Bronchodilator reflex, vagosympathetic, evidences for, initiated by prostaglandin  $F_{2z}$ , in guinea-pig, 422P
- Bronchus, rat strips in vitro, comparison of drug-induced responses with tracheal and lung strips, 71
- Buprenorphine, effect of, on enhancement of a nociceptive reaction by opioid antagonists in mice, 91
- (-)-Butaclamol, potential of, as an antischizophrenic agent, in dexamphetamine-induced EEG arousal test model in rats, 410P
- (+)-Butaclamol, potential of, as an antischizophrenic agent, in dexamphetamine-induced arousal test model in rats, 410P
- **Butoxamine**, response of potassium-depolarized tracheal chain preparations from guinea-pig to, 421P
- (+)-Butoxamine, effect of, on 5-hydroxytryptamineinduced hyperactivity response in rats, 193
- 1-n-Butylimidazole, a potent and selective inhibitor of thromboxane synthetase, 435P

C

- Caesium chloride, antidepressant action of, and its modification of chlorpromazine toxicity in mice. 9
- Calcium, effect of, on effect of 4-aminopyridine on transmitter release from motor nerve endings, 623
- —, content of, in myocardium, as a measure of corticosteroid involvement in changes in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129
- effect of, on prevention by guanethidine analogues of output of noradrenaline induced by sodium reduction in rabbit ventricular slices, 37
- effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- effects of, on acid secretion from rat isolated gastric mucosa during stimulation with histamine, pentagastrin, methacholine and dibutyryl cyclic adenosine 3',5'-monophosphate, 359
- , effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- Calcium dependence, of basal and secretagogue-induced acid secretion in isolated rat stomach, 424P
- Cameras, gamma, use of, to measure disposition and fate of iodide in rabbit, 468P
- Carbachol, effect of, on release of [3H]-noradrenaline from motor adrenergic nerves of rat anococcygeus muscle, 615
- responses of tracheal chain preparations from guineapig to, effects of metanephrine on, 421P
- effect of, on response of nerve plexus of rat anococcygeus muscle to extrinsic nerve stimulation, 173

- —, effect of, on efflux of <sup>42</sup>K and <sup>86</sup>Rb from tissue cultures of BC<sub>3</sub>H1 nonfusing muscle cell line, 29
- Carbamazepine, effect of, on folate content of rat brain, and antiepileptic effect, 407P
- , antiepileptic effect of, in rat, and metabolism of monoamines in brain, 407P
- Carbamylcholine, effect of, on outflow of [3H]-noradrenaline from rat vas deferens, 418P
- effect of, on anococcygeus muscle of dog, 452P
- effect of a phosphodiesterase inhibitor on cyclic GMP changes induced by, in mouse neuroblastoma cells, 450P
- Carbenoxolone, mucosal cell turnover in upper gut of mouse and its modification by, 426P
- Carbohydrate metabolism, in rat, effects of somatostatin on. 311
- Carbonic anhydrase, activity of, in glial cells of rat, and GABA-feedback hypothesis, 382P
- Carbon dioxide, ventilatory response to, effect of diazepam on threshold of, 454P
- Cardiac output, changes in, and response to lower body negative pressure in trypanosome-infected rabbits, 397P
- , effect of adrenergic neurone blockade on response of, of rabbit to lower body negative pressure, 443P
- Cardiovascular control, central, in cat, cyclic nucleotides and, 395P
- Cardiovascular effects, of acebutalol following coronary artery occlusion and reperfusion in anaesthetized dog, 265
- —, of propranolol in spontaneously hypertensive rat, inhibitory role for adrenals in, 391P
- Cardiovascular system, effect of acute adrenergic neurone blockade on response of, of rabbit to lower body negative pressure, 443P
- , of pithed rat, sympathomimetic effects of pancuronium bromide on, comparison with effects of drugs blocking neuronal uptake of noradrenaline, 589
- responses of, to lower body negative pressure in rabbits treated with 6-hydroxydopamine, 396P
- Carotid artery loop puncture, a convenient technique for direct blood pressure measurement in conscious dog, 473P
- Catechol, administration of, recording of responses evoked by electrical stimulation of muscles of forelimb of rats induced to convulse by, 539
- Catecholamine fluorescence studies, of rat and rabbit anococcygeus muscle, 13
- Catecholamines, effect of, on efflux of <sup>42</sup>K and <sup>86</sup>Rb from tissue cultures of the nonfusing BC<sub>3</sub>H1 muscle cell line, 29
- —, plasma, adrenal origin of, after decapitation: a study in normal and diabetic rats, 3
- effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- --, effect of lesions of frontal cortex of rat on levels of, 430P
- , comparison of actions of, and octopamine on single neurones of rat cerebral cortex, 485
- Cerebral cortex, rat, neurones of, comparison of actions of octopamine and catecholamines on, 485
- -. rat, neurones of, response of, to adenosine, adenosine

5'-monophosphate and adenosine triphosphate, antagonism of, by clonidine, 369

Cerebral perfusion, in dog, 463P

Cerebrospinal fluid, rat, pharmacokinetics of lithium in, 273 Chloral hydrate, studies on interaction between, and ethanol, 400P

Chlordiazepoxide, interaction of, with (+)-amphetamine or fenfluramine in rat feeding, 378P

Chlorimipramine, effect of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75—, effect of, on behaviour in rat, 431P

p-Chloroamphetamine, effects of putative 5-hydroxytryptamine antagonists on behaviour produced by administration of, in rats, 201

p-Chlorophenylalanine, effect of, on effect of monoamine oxidase inhibitors on behaviour in rat, 431P

2-Chloro-3-phytylnaphthoquinone, mechanism of action of, in rabbit, 399P

Chlorpheniramine, pretreatment with, effect of, on effect of compound 48/80 on inhibitory actions of morphineand methionine-enkephalin on electrically induced contractions of guinea-pig ileum, 511

Chlorpromazine, toxicity of, in mice, modification of, by caesium chloride, 9

 effect of infusion of, into distal aorta of rat on perfusion pressure, 389P

Cholesterol, -lowering effect of lofibrate, effect of vitamin C on, 477P

Choline, uptake of, and regulation of choline acetyltransferase in relation to neuronal activity, 409P

 effect of, on prevention by guanethidine analogues of output of noradrenaline induced by sodium reduction in rabbit ventricular slices, 37

 effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565

Choline acetyltransferase, regulation of, in relation to neuronal activity, and choline uptake, 409P

Cholinergic activity, in guinea-pig ileum, pharmacological characterization of presynaptic α-adrenoceptors regulating, 293

Cholinergic innervation, in rabbit ileum, 247

Cholinergic nerves, electrical stimulation of, supplying longitudinal muscle of guinea-pig ileum, effects of α-adrenoceptor agonists and antagonists on, 293

Cholinoceptor blocking drugs, effects of, on responses evoked by electrical stimulation of muscles of forelimb of anaesthetized rat induced to convulse by catechol administration, 539

Cholinoceptors, curariform, in muscle spindles of rat isolated phrenic nerve-diaphragm preparation, 47

—, of BC<sub>3</sub>H1 nonfusing muscle cell line, pharmacology of, 29

Chronotropic responses, to noradrenaline, isoprenaline, tyramine and electrical stimulation, of rat isolated atria, postnatal development of, 83

Cimetidine, effect of, on relaxant action of glucagon on rabbit renal arteries, 99

 , effect of, on relaxant action of dimaprit on guinea-pig gall bladder in situ, 219

 effect of, on electrically induced twitch response of mouse vas deferens inhibited by clonidine, 416P

-, effect of, on anococcygeus muscle of dog, 452P

—, effect of, on effect of  $17\beta$ -oestradiol on uterine blood flow in rat, 387P

Circadian rhythms, urinary, a domiciliary study of, in rheumatoid patients with particular reference to effects of time of administration of corticosteroid drugs, 453P

Circadian variations, in blood pressure, effect of drug therapy on, and influence of timing of therapy, 476P

Circling behaviour, in rat, produced by methamphetamine, effect of alprenolol, sotalol, pindolol and metaprolol on 193

Clonazepam, altered serotoninergic activity in mouse brain induced by, 432P

Clonidine, effect of, on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53

 , effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293

—, time-course of pre- and post-junctional effects of, in pithed rat, 419P

 effect of pancuronium bromide on effect of, on cardiovascular system of pithed rat, 589

 antagonism by, of neuronal depressant responses to adenosine, adenosine 5'-monophosphate and adenosine triphosphate, 369

 —, electrically induced twitch response of mouse vas deferens to, mediated by presynaptic α-adrenoceptors, 416P

[3H]-clonidine, localization of binding of, in guinea-pig kidney, 418P

Clozapine, potential of, as an antischizophrenic agent, in dexamphetamine-induced EEG arousal test model in rats, 410P

Cocaine, effect of, on ability of rabbit ileum to take up noradrenaline, 247

 effect of, on inhibition by tyramine of twitch responses of mouse vas deferens to field stimulation, 145

 effect of, on inhibitory responses to noradrenaline in bovine iris sphincter, tracheal muscle and facial artery, 545

—, effect of, on effect of methoxamine on outflow of [3H]noradrenaline from rat vas deferens, 418P

 effect of, compared with pancuronium bromide on cardiovascular system of pithed rat, 589

Colon, metabolism and distribution of exogenous histamine in cat after infusion into, 109

Compound 48/80, antagonistic effect of, on inhibitory actions of morphine- and methionine-enkephalin on electrically induced contractions of guinea-pig ileum 511

Conductance changes, action of N-methyl-D-aspartic and kainic acids on cat motoneurones with emphasis on, 384P

Contractile properties, of smooth muscle cells of rabbit superior mesenteric artery, effects of acetylcholine on, 43 Convulsant action, of catechol, possible explanation for, 539

Convulsant drugs, effects of intrapallidal administration of, on head turning evoked by striatal stimulation in rats, 381P

Convulsive activity, induced by catechol administration in anaesthetized rat, recording of responses evoked by electrical stimulation of muscles of forelimb during, 539

- Corneal membrane, transport of drugs across, effect of ionassociation on. 444P
- Coronary artery, occlusion and reperfusion of, cardiovascular effects of acebutalol in anaesthetized dog following, 265
- Corpus striatum, rat, dopamine receptors and  $\beta$ -adrenoceptors in, effects of acute and chronic administration of amphetamine on, 411P
- Corticosteroid drugs, a domiciliary study of urinary circadian rhythms in rheumatoid patients with particular reference to effects of time of administration of, 453P
- —, therapy with, time of, 457P
- effects of, given at various clock times on cellmediated immunity to oxazolone, 427P
- involvement of, in changes in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129
- Corticosterone, plasma, as a measure of assessing corticosteroid involvement in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129
- Cyclazocine, effect of, on electrically evoked contractions of rat vas deferens, 327
- receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Cyclic nucleotides, and central cardiovascular control in cat, 395P
- Cyproheptadine, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- effect of, on modulation of amphetamine hyperactivity by DPI injected into rat nucleus accumbens, 461P
- Cysteate, effect of, on [3H]-dopamine release from rat striatum in vitro, 429P

D

- **Debrisoquine**, effect of, on response of cardiovascular system of rabbit to lower body negative pressure, 443P
- Decapitation, adrenal origin of plasma catecholamines after, a study in normal and diabetic rats, 3
- Des-Arg<sup>9</sup>-Leu-OMe<sup>8</sup>-Bk, effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- **Desipramine**, effect of, on actions of noradrenaline and phenylephrine on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- , lesions of frontal cortex induced by, and 6-hydroxydopamine, effect of, on neurotransmitter systems in subcortical regions, 430P
- —, effect of, on effect of methoxamine on outflow of [<sup>3</sup>H]-noradrenaline from rat vas deferens, 418P
- **Dexamethasone**, effect of, on release of thromboxanes and prostaglandins from guinea-pig lung by slow reacting substance of anaphylaxis, 211
- --, effect of, given at various clock times on cell-mediated immunity to oxazolone, 427P
- **Dexamphetamine,** EEG arousal induced by, in rats, as a possible new test model for potential antischizophrenic agents, 410P
- Dextran 110, effect of, on response of cardiovascular system of rabbit to lower body negative pressure, 443P
- **Dextrorphan**, effect of, on uptake and release of 5-hydroxy-tryptamine in rat synaptosomal preparations, 75

- **Diabetes,** high activity of dopamine- $\beta$ -hydroxylase in, in rats, 3
- **Diamine oxidase,** metabolism of exogenous histamine by, in cat, 109
- Diazepam, effect of, on development of epileptic kindling in rats, 406P
- potential of, in dexamphetamine-induced EEG arousal test model in rats, 410P
- , effect of, on threshold of ventilatory response to CO<sub>2</sub>, 454P
- ventilatory patterns in surgical patients premedicated with, 458P
- **Dibutyryl cyclic adenosine** 3',5'-monophosphate, acid secretion induced by, in rat isolated stomach, calcium dependence of, 424P
- , effect of, on effects of calcium on acid secretion from rat isolated gastric mucosa, 359
- Dibutyryl cyclic guanosine monophosphate, role of, in central cardiovascular control in cat, 395P
- Difenacoum, mechanism of action of, in rabbit, 399P
- Digital plateau, rate meter that detects, 474P
- (-)-Dihydroalprenolol, development of a radioreceptor assay for, in plasma, 449P
- (-)-[<sup>3</sup>H]-dihydroalprenolol, use of, as ligand, in study of effect of amphetamine on β-adrenoceptors and dopamine receptors in rat corpus striatum and limbic forebrain, 411P
- Dihydro-β-erythroidine, effect of, on response to extrinsic nerve stimulation of nerve plexus of rat anococcygeus muscle, 173
- **Dihydroxyphenylacetic acid,** mesolimbic, effect of trifluoperazine on, in rats, 414P
- —, metabolism of, in rat brain, influence of L-tryptophan and monoamine oxidase inhibitors on, 341
- (3,4-Dihydroxy-phenylamino)-2-imidazoline, modulation of amphetamine hyperactivity by, injected into rat nucleus accumbens, 461P
- 5,7-Dihydroxytryptamine, effect of, on behaviour produced by administration of tranylcypromine and L-tryptophan or tranylcypromine and L-DOPA in rats, 201
- Diltiazem, (CRD-401), effects of, on membrane and mechanical properties of vascular smooth muscles of rabbit, 503
- **Dimaprit**, biphasic inotropic response of guinea-pig isolated atria to, 387P
- effect of, on blood flow in blood perfused trachea of dog in situ, 553
- —, mimics relaxant action of histamine on guinea-pig gall bladder in situ, 219
- Dimethoate, injection of, into locusts, motor output to flight muscles and inhibition of acetylcholinesterase after, 446P
- N,N-dimethylhistamine, biphasic inotropic response of guinea-pig atria to, 387P
- Diphenhydramine, effect of, on effect of histamine on tracheal constriction and vasodilatation in dog in situ, 553
- -, effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- Diphenylhydantoin, effect of, on folate content of rat brain, and antiepileptic effect, 407P
- , antiepileptic effect of, in rat, and metabolism of monoamines in brain, 407P

- **Dissociation constant**, of isoprenaline, orciprenaline and terbutaline, estimation of, in guinea-pig isolated atria by use of functional antagonism, 420P
- Diuretic responses, to frusemide administration in normal subjects, influence of sodium and potassium supplements on, 285
- Diuretics, and sodium loading, in rat, effects of prostaglandin synthetase inhibition on natriuresis induced by, 439P
- **Diving,** in ducks, role of mesenteric vasculature in, during, 415P
- DOCA/salt hypertension, in rats, effect of SQ 14225 on fluid intake in, 390P
- Dodecylbenzyldimethyl-ammonium chloride model system, use of, to determine effects of ion-association on transcorneal transport of drugs, 444P
- L-DOPA, and tranylcypromine, administration of, in rats, effects of putative 5-hydroxytryptamine antagonists on behaviour produced by, 201
- **Dopamine**, metabolism of, in rat brain, effect of antiepileptic drugs on, 407P
- vascular response to local injection of, comparison of, in blood-perfused gracilis muscle and hind paw pads of dogs, 253
- effect of, on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- -, effect of, on rabbit renal artery, 102
- —, uptake of, in rat striatum, effect of (+)- and (-)-enantiomers of 2-amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene on, 433P
- —, modulation of noradrenergic transmission in rabbit isolated ear artery by, 527
- metabolism of, in rat brain, influence of L-tryptophan and monoamine oxidase inhibitors on, 341
- —, comparison of actions of, and octopamine on single neurones from rat cerebral cortex, 485
- forebrain concentration of, effect of dorsal bundle injection of 6-hydroxydopamine on, in rats, 601
- in rat brain, effect of α-flupenthixol decanoate on, 379P
- release of, measurement of, in CNS of freely moving unanaesthetized rats, 470P
- —, effect of lesions of frontal cortex of rat on level of, in subcortical regions, 430P
- involvement of, in behavioural effects of α-methyltryptamine in rat, 431P
- [3H]-dopamine, use of, as ligand, in study of selective affinity of bromocriptine and lergotrile for rat limbic dopamine binding sites, 413P
- release of, specific stimulation of, from dendrites of rat substantia nigra by glycine, 428P
- release of, amino acid-induced stimulation of, from rat striatum in vitro, 429P
- **Dopamine binding sites,** rat limbic, selective affinities of bromocriptine and lergotrile for, 413P
- Dopamine-β-hydroxylase, activity of, measurement of, in superfused preparations, 464P
- activity of, in blood obtained from normal and diabetic rats, effect of decapitation on, 3
- **Dopamine receptors,** effects of (+)- and (-)-enantiomers of 2-amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene on, in rat striatum, 433P
- -, cerebral, supersensitivity of, during ongoing chronic

- (six months) administration of trifluoperazine in rats, 414P
- vasodilator, localization of, in canine hindlimb, 253
   effect of acute and chronic administration of amphet-
- amine on, in rat corpus striatum and limbic forebrain,
  411P
- **Doppler shift radar,** monitoring motor activity using, 471P **Dorsal bundle,** noradrenergic, effects of injections of 6-hydroxydopamine into, on avoidance response in rats, 601
- **Dotheipin hydrochloride,** metabolism of, in vivo and in vitro in man, cat, dog and rat, 405P
- Duodenum, dog, effect of glucagon on, 475P
- infusion of histamine into, and resulting distribution of metabolites, 109

E

- E. coli endotoxin shock, in dog, treatment with lidocaine or indomethacin. 185
- Ear artery, rabbit isolated, modulation of noradrenergic transmission in, by dopamine, 527
- EEG arousal, induced by dexamphetamine, in rats, as a possible new test model for potential antischizophrenic agents, 410P
- Efficacy, relative, of isoprenaline, or ciprenaline and terbutaline, estimation of, in guinea-pig isolated atria by use of functional antagonism, 420P
- EGTA, effect of, on prevention by guanethidine analogues of output of noradrenaline induced by sodium reduction in rabbit ventricular slices, 37
- Electrical field stimulation, of mouse vas deferens, effects of endogenous noradrenaline release and depletion on twitch responses after, 145
- , characterization of acid secretory responses of rat isolated gastric mucosa to, 445P
- , an analysis of response of perfused rat vas deferens to, 467P
- Electrical stimulation, of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, effect of α-adrenoceptor agonists and antagonists on, 293
- , postnatal development of adrenoceptor responses to, in rat isolated atria, 83
- , effect of, on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- recording of response evoked by, from muscles of forelimb of anaesthetized rat induced to convulse by catechol administration, 539
- , of guinea-pig ileum, antagonistic effect of compound 48/80 on inhibitory actions of morphine- and methionine-enkephalin on, 511
- Endoperoxide analogue, U46619, inhibition by, of secretion from rat isolated gastric mucosa stimulated by hist-amine, pentagastrin and methacholine, 423P
- β-Endorphin, effect of, on electrically evoked contractions of rat vas deferens, 327
- Endothelial cells, synthesis of prostaglandin  $I_2$  (prostacyclin) by, effects of sulphinpyrazone and aspirin on, 481
- Endotoxin shock, E. coli, in dog, treatment with lidocaine or indomethacin, 185

- **Enkephalins,** effect of, on electrically evoked contractions of rat vas deferens, 327
- —, methionine- and morphine-, inhibitory effects of, on electrically induced contractions of guinea-pig ileum, antagonistic effect of compound 48/80 on, 511
- Enterohepatic circulation, reduction of, of norethisterone by antibiotics in rat, 401P
- Epileptic kindling, development of, in rat, effect of anticonvulsant drugs and folic acid on, 406P
- Ergometrine, effect of, on effects of dopamine on vasoconstrictor responses to field stimulation of sympathetic nerves and to exogenous noradrenaline in rabbit isolated ear artery, 527
- , effect of, on electrically induced twitch response in mouse vas deferens, 416P
- Eserine, effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- Ethanol, studies on interaction between, and chloral hydrate, 400P
- Ethanolamine-O-sulphate, effect of, on development of epileptic kindling in rats, 406P
- Ethylketazocine, receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Etorphine, effect of, on enhancement of a nociceptive reaction by opioid antagonists in mice, 91
- —, effect of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75
- **4,7-Exo-methylene-hexahydroisoindoline-ethyl guanidine,** prevention by, of output of noradrenaline induced by sodium reduction in rabbit ventricular slices, 37
- Extrapyramidal area, of rat brain, effect of lesions of frontal cortex on levels of neurotransmitters in, 430P

F

- **Facial artery,** mechanism of inactivation of noradrenaline in, implications for  $\beta$ -adrenoceptor-mediated responses, 545
- Fatty acids, essential, role of, during experimental fever of rats, 439P
- [14C]-fazadinium, disposition of, in anaesthetized greyhound, influence of impaired renal function on, 402P
- Feeding parameters, in rat, interactions of chlordiazepoxide with (+)-amphetamine or fenfluramine, 378P
- Fenfluramine, effect of, on obesity in rats, a new method for screening of antiobesity agents, 442P
- , effect of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75
- mechanism by which, could inhibit synthesis of triacylglycerols, 377P
- interaction of, with chlordiazepoxide in rat feeding, 378P
- **Fentanyl,** receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Fever, experimental, of rats, prostaglandins are not essential in, 439P
- First pass extraction, hepatic, a technique for measuring, in rat perfused liver, 469P
- Flight muscles, motor output to, and inhibition of acetylcholinesterase after injection of dimethoate into locusts, 446P

- Fluorescence studies, reveal purinergic innervation of anococcygeus muscle in rat and rabbit, 13
- Fluoxetine, effect of, on behaviour in rat, 431P
- **Fluphenazine**, effect of, on hyperactivity in rat induced by 2-amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene, 434P
- , injection into rat nucleus accumbens, effect of, on amphetamine hyperactivity, 461P
- β-Flupenthixol, potential of, as an antischizophrenic agent, in dexamphetamine-induced EEG arousal test model in rats, 410P
- α-Flupenthixol, effect of, on actions of octopamine and catecholamines on single neurones from rat cerebral cortex, 485
- potential of, as an antischizophrenic agent, in dexamphetamine-induced EEG arousal test model in rats, 410P
- α-Flupenthixol decanoate, a long-acting neuroleptic, neurochemical effects of treatment with, in rat, 379P
- Flurbiprofen, effect of, on extracellular release of lysosomal enzymes from mouse peritoneal macrophages induced by asbestos and zymosan *in vitro*, 448P
- Folate, content of, in rat brain, effect of short- and longterm administration of some anticonvulsant drugs on, 407P
- Folic acid, and anticonvulsant drugs on development of epileptic kindling in rats, 406P
- Forebrain, limbic rat, dopamine receptors and  $\beta$ -adrenoceptors in, effects of acute and chronic administration of amphetamine on, 411P
- Forelimb, muscles of, in anaesthetized rat induced to convulse by catechol administration, recording of responses from, evoked by electrical stimulation, 539
- Frontal cortex, rat, lesions of, changes in subcortical regions, 430P
- Frusemide, continuous infusion of, in refractory oedema, in man, 453P
- administration of, in normal subjects, influence of sodium and potassium supplements on diuretic responses of, 285
- effect of indomethacin on natriuresis induced by, in rat, 439P
- Functional antagonism, use of, to estimate dissociation constants and relative efficacies of isoprenaline, orciprenaline and terbutaline in guinea-pig isolated atria, 420P

G

- Gall bladder, guinea-pig, occurrence of H<sub>1</sub>- and H<sub>2</sub>-histamine receptors in, in situ, 219
- Gallamine, effect of, on sympathomimetic effects of pancuronium bromide on cardiovascular system of pithed rat, 589
- —, effect of, on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623
- **Gamma cameras,** use of, to measure disposition and fate of iodide in rabbit, 468P
- Ganglia, an investigation of role of, in innervation of rat anococcygeus muscle: an electrical and mechanical study, 173
- Ganglion blocking agents, effects of, in in situ uterus of anaesthetized rat, 444P

- Gastric acid secretion, effects of somatostatin on, in rat, 311
- —, in dog, role of  $\beta_1$  and  $\beta_2$  adrenoceptors in inhibition of, 153
- —, from rat isolated gastric mucosa, effects of calcium on, during stimulation with histamine, pentagastrin, methacholine, and dibutyryl cyclic adenosine 3',5'monophosphate, 359
- , characterization of, of rat isolated gastric mucosa in response to electrical field stimulation, 445P
- —, β-adrenoceptor agonist stimulation of, in rat isolated stomach, 425P
- in isolated rat stomach, calcium dependence of basal and secretagogue-induced, 424P
- —, from rat isolated gastric mucosa stimulated by histamine, pentagastrin and methacholine, differential inhibition by PGE<sub>1</sub>, and PGE<sub>2</sub> and endoperoxide analogue U46619 of, 423P
- Gastric mucosa, rat isolated, effect of calcium on acid secretion from, during stimulation with histamine, pentagastrin, methacholine and dibutyryl cyclic adenosine 3',5'-monophosphate, 359
- rat, inhibition of prostacyclin formation in, by indomethacin, 438P
- rat isolated, characterization of acid secretory responses of, to electrical field stimulation, 445P
- rat isolated, stimulated by histamine, pentagastrin and methacholine, differential inhibition by PGE<sub>1</sub>, PGE<sub>2</sub> and endoperoxide analogue U46619 of, 423P
- Gastrin, acid secretion induced by, in rat isolated stomach, calcium dependence of, 424P
- Glial cell, function, and GABA-feedback hypothesis, 382P
- Globulin, binding, for plasma sex hormone and oestrogen therapy, 456P
- Globus pallidus, effects of lesions of frontal cortex of rat, on level of neurotransmitters in, 430P
- Glucagon, effect of, on canine duodenum and small intestine, 475P
- -, a new bioassay for, 99
- Glucose, plasma, effect of somatostatin on, in rat. 311
- D-Glucuronic acid, effect of, on platelet thrombogenesis induced by laser injury to rat and hamster venules, 301
- β-Glucuronidase, effects of different particulate stimuli on extracellular release of prostaglandins and, from mouse peritoneal macrophages in vitro, 448P
- Glutamate, excitation of nucleus lateralis neurones by, effect of morphine on, in rat, 137
- L-Glutamate, action of, on cat motoneurones with emphasis on conductance changes, 384P
- Glutamate diethylester, effect of, on effect of glutamate on release of [3H]-dopamine from rat striatum in vitro, 429P
- Glutamic acid, D- and L-effect of, on [3H]-dopamine release from rat striatum in vitro, 429P
- L-Glutamine, effect of, on release of [3H]-dopamine from rat striatum in vitro, 429P
- Glyceryl trinatrate, use of, to assess vascular reactivity in hind paw pads and gracilis muscle of dog, 253
- Glycine, specific stimulation of [3H]-dopamine release from dendrites of rat substantia nigra by, 428P
- Glycogen, liver, effect of somatostatin on, in rat, 311 Gold, effect of, on extracellular release of lysosomal

- enzymes from mouse peritoneal macrophages induced by asbestos and zymosan in vitro, 448P
- Gold salts, effect of, in kaolin-induced paw oedema and adjuvant-induced arthritis in rat, 462P
- GPA 2163, enhancement of a nociceptive reaction by, in mice, 91
- Gracilis muscle, blood-perfused dog, vascular response of, to local injection of dopamine and isoprenaline, 253
- Guanidine, effect of, on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623
- Guanethidine, effect of, on response of nerve plexus of rat anococcygeus muscle to extrinsic nerve stimulation, 173
- further evidence for prevention by, of noradrenaline efflux from rabbit ventricular slices induced by a low external sodium concentration, 163
- , increase in tone of rat and rabbit anococcygeus muscle by, effect of, on response to field stimulation, 13
- , analogues of, prevention by, of output of noradrenaline induced by sodium reduction in rabbit ventricular slices, 37
- -, effect of, on anococcygeus muscle of dog, 452P
- Guanosine monophosphate, cyclic 3',5', effect of, on rabbit renal artery, 102
- —, changes in, induced by muscarinic agonists in mouse neuroblastoma cells, effect of phosphodiesterase inhibitor on, 450P
- Gut, mouse upper, mucosal cell turnover in, and its modification by carbenoxolone, 426P

н

- H35/25, effect of, on salbutamol- and isoprenaline-induced inhibition of gastric acid secretion in dog, 153
- Haloperidol, effect of, on vasodilatation and constriction in hind paw pads of dog, 253
- effect of, on effects of dopamine on vasoconstrictor responses to field stimulation of sympathetic nerves and to exogenous noradrenaline, in rabbit isolated ear artery, 527
- [3H]-haloperidol, use of, as ligand, in study of selective affinity of bromocriptine and lergotrile for rat limbic dopamine binding sites, 413P
- Head-turning, evoked by striatal stimulation in rats, effects of intrapallidal administration of convulsant drugs on, 381P
- Hearing, menstrual fluctuations in, suggestions for hormone and drug monitoring methods in man, 476P
- Heart, metabolism and distribution of exogenous histamine in cat, after infusion into portal vein, 109
- dog, pharmacological characteristics of adrenoceptors mediating positive inotropic responses of, 53
- rabbit, synthesis of prostaglandin in, effect of nicotine on, 559
- , rat isolated perfused, preparation, a novel modification of, 466P
- Hearts, weight of, as a measure of assessing corticosteroid involvement in changes in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129

- Heart rate, effect of adrenergic neurone blockade on response of, of rabbit to lower body negative pressure, 443P
- during spontaneous hypertension in rat, inhibitory role for adrenals in cardiovascular effects of propranolol, 391P
- —, effect of SQ 14225 on, in conscious normotensive rabbits, 389P
- changes in, and response to lower body negative pressure in trypanosome-infected rabbits, 397P
- Hemicholinium-3, effect of, on muscle spindle afferent activity of rat isolated phrenic nerve-diaphragm preparation. 47
- Hepatic artery, dog, perfused vascular bed of, response of, to histamine and 5-hydroxytryptamine, 581
- **Hepatic first pass extraction,** a technique for measuring, in rat perfused liver, 469P
- Hepatic metabolism, development of tolerance to ketamine and significance of, 63
- Hexamethonium, effect of, on response to extrinsic nerve stimulation of nerve plexus of rat anococcygeus muscle, 173
- effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of guinea-pig and rabbit, 565
- --, effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- -, effect of, on in situ uterus of anaesthetized rat, 444P
- —, effect of, on anococcygeus muscle of dog, 452P
- effect of, on responses evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechol administration, 539
- High pressure ion-exchange chromatography, assay of picomole quantities of polyamines by, 465P
- Hindlimb, canine, localization of vasodilator dopamine receptors in, 253
- Hindquarters, of rabbit, application of negative pressure to, effect of acute adrenergic neurone blockade on response of cardiovascular system to, 443P
- rat, some properties of 5-hydroxytryptamine receptors in, 389P
- , of rabbit, effect of application of negative pressure to, on cardiovascular system after treatment with 6-hydroxydopamine, 396P
- **Histamine**, acid secretion induced by, in rat isolated stomach, calcium dependence of, 424P
- rat isolated gastric mucosa stimulated by, differential inhibition by PGE<sub>1</sub>, PGE<sub>2</sub> and endoperoxide analogue U46619 of secretion from, 423P
- —, bronchoconstrictor, action of, after  $\beta$ -adrenoceptor blockade induced by propranolol in guinea-pig, 422P
- radiolabelled, separation and quantification of metabolites of, in rat brain, 460P
- radiolabelled, metabolism in vivo and in vitro of, in rat brain, 404P
- --, effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- -, effect of, on anococcygeus muscle of dog, 452P
- biphasic inotropic response of guinea-pig isolated atria to, 387P
- involvement of, in regulation of uterine blood flow in rat, 387P
- . responses of simultaneously perfused hepatic arterial

- and portal venous vascular beds of dog to, 581
- —, effect of, on effects of calcium on acid secretion from rat isolated gastric mucosa, 359
- effect of, on effects of pentobarbitone and urethane on pulmonary airways resistance in guinea-pigs, 519
- —, effect of, on blood flow and intraluminal pressure in blood-perfused trachea of dog in situ, 553
- metabolism and distribution of exogenous, in cats, 109
- -, effect of, on rabbit renal artery, 102
- content of, in rabbit skin autografts and homografts during healing-in, 123
- , effect of, on electrically induced twitch response of mouse vas deferens, 416P
- , effect of, on inflammatory exudation in guinea-pig and rabbit skin, 447P
- response of rabbit isolated aortae to, age-related changes in, 229
- Histamine receptor agonists, biphasic inotropic response of guinea-pig isolated atria to, 387P
- Histamine H<sub>2</sub>-receptor, mediates effect of histamine on electrically induced twitch response of mouse vas deferens, 416P
- Histamine receptors, H<sub>1</sub>- and H<sub>2</sub>-, occurrence of, in guineapig gall bladder *in situ*, 219
- —, pharmacological analysis of, in musculature and vasculature of dog trachea in situ, 553
- **D-Homocysteate**, action of, on cat motoneurones with emphasis on conductance changes, 384P
- Homografts, rabbit skin, blood flow changes in, and correlation with presence of vasoactive agents in homogenates of the grafts, 123
- bis-Homo-y-lineoleic acid, role of, during experimental fever of rats, 439P
- Homovanillic acid, metabolism of, in rat brain, influence of L-tryptophan and monoamine oxidase inhibitors on, 341
- mesolimbic, effect of trifluoperazine on, in rats, 414P
   6-Hydroxydopamine, effect of, on effect of hexamethonium on noradrenaline-treated nerve plexus of rat anococcygeus muscle, 173
- effect of, on release of ATP from stimulation of nonadrenergic, non-cholinergic, inhibitory nerves of rat and rabbit anococcygeus muscle, 13
- effects of dorsal bundle injections of, on avoidance response in rats, 601
- rabbits treated with, response of cardiovascular system to lower body negative pressure in, 396P
- , lesions of frontal cortex induced by, effect of, on neurotransmitter systems in subcortical regions, 430P
- 5-Hydroxyindoleacetic acid, metabolism of, in rat brain, influence of L-tryptophan and monoamine oxidase inhibitors on, 341
- metabolism of, in rat brain, effect of antiepileptic drugs on, 407P
- -, in mouse brain, effect of clonazepam on, 432P
- 5-Hydroxytryptamine, mouse brain levels of, effect of clonazepam on, 432P
- involvement of, in behavioural effects of α-methyltryptamine in rat, 431P
- effect of lesions of frontal cortex of rat on level of, in subcortical regions, 430P
- , metabolism of, in rat brain, effect of antiepileptic drugs on, 407P

- release of, measurement of, in freely moving unanaesthetized rats, 470P
- . effect of, on anococcygeus muscle of dog, 452P
- effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- response of simultaneously perfused hepatic arterial and portal venous vascular beds of dog to, 581
- -, response of rat cerebral cortex neurones to, effect of clonidine on, 369
- . effect of, on effects of pentobarbitone and urethane on pulmonary airways resistance in guinea-pigs. 519
- -, effect of, on rabbit renal artery, 102
- , uptake and release of, in rat synaptosomal preparations, effects of narcotic analgesics on, 75
- comparison of responses to, on rat tracheal, bronchial and lung strips in vitro, 71
- , increased brain concentrations of, β-adrenoceptor antagonists inhibit behavioural responses of rats to, 193
- , response of rabbit isolated aortae to, age-related changes in, 229
- [3H]-5-hydroxytryptamine, release of, from dendrites of rat substantia nigra, effect of glycine on, 428P
- 5-Hydroxytryptamine antagonists, putative, effects of, on behaviour produced by administration of tranylcypromine and L-tryptophan or tranylcypromine and L-DOPA to rats, 201
- **5-Hydroxytryptamine receptors,** demonstration of, through inhibition by methergoline in cat pial arteries *in vitro*, 281
- -, some properties of, in hindquarters of rat, 389P
- **Hyoscine**, effect of, on responses evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechol administration, 539
- effect of, on response to electrical stimulation of periarterial nerves to rabbit ileum, 247
- effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- **Hyperactivity,** induced by 2-amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene in rat, effects of (+)- and (-)-enantiomers of sulpiride on, 434P
- in rats, following administration of tranyleypromine and L-tryptophan or tranyleypromine and L-DOPA.
   effects of putative 5-hydroxytryptamine antagonists on, 201
- Hyperactivity response, 5-hydroxytryptamine-induced  $\beta$ -adrenoceptor antagonists inhibit, of rats, 193
- **Hypotension,** produced by acebutalol in anaesthetized dog following coronary artery occlusion and reperfusion. 265
- in rats induced by short-term isolation, corticosteroid involvement in changes in noradrenergic responsiveness of tissues from, 129
- , spontaneous, in rat, inhibitory role for adrenals in cardiovascular effects of propranolol in, 391P
- -- , in rats produced by DOCA/salt, effect of SQ 14225 on fluid intake in, 390P
- , spontaneous, in rats, changes in plasma renin levels during, with increasing age, 392P
- **Hypoxia**, effect of, on release of <sup>3</sup>H-purines from [<sup>3</sup>H]-adenine labelled rabbit kidney following sympathetic nerve stimulation, 239

- **Ibotenate**, effect of, on [<sup>3</sup>H]-dopamine release from rat striatum *in vitro*, 429P
- **Ileum.** guinea-pig. antagonistic action of compound 48/80 on inhibitory actions of morphine- and methionine-enkephalin on electrically induced contractions of, 511
- guinea-pig, pharmacological characterization of presynaptic α-adrenoceptors regulating cholinergic activity in, 293
- some observations on development of adrenergic innervation in rabbit, 247
  - . myenteric plexus of, of guinea-pig and rabbit, factors influencing release of acetylcholine from, 565
- rat isolated, longitudinal muscle from, effects of prostaglandins on contractile action of bradykinin on, 441P
- **Imidazole**, effect of, on release of prostaglandins and thromboxanes from guinea-pig lung by slow reacting substance of anaphylaxis, 211
- **Imidazoleacetic acid,** as a metabolite in blood of histamine instilled into small intestine of cat, 109
- **Imidazole 4' acetic acid,** effect of, on mean arterial pressure after infusion into third ventricle of cat, 395P
- **Imidazole** *N***-methyltransferase**, metabolism of exogenous histamine by, in cat, 109
- **Immune complexes,** effect of, on extracellular release of prostaglandins and lysosomal enzymes from mouse peritoneal macrophages *in vitro*, 448P
- **Immunosuppressive agents**, corticosteroids as, when given at various clock times to rats, 427P
- **Indicator dyes,** are inhibitors of prostaglandin E<sub>2</sub> inactivation in rat isolated lung. 386P
- **Indomethacin**, effect of, on natriuretic and kaliuretic responses to diuretics and sodium loading in rat, 439P
- effect of, on effects of prostaglandins on contractile action of bradykinin on longitudinal muscle of rat isolated ileum, 441P
- effect of, on adjuvant-induced arthritis and kaolininduced paw oedema in rat, 462P
- effect of, on extracellular release of lysosomal enzymes from mouse peritoneal macrophages induced by asbestos and zymosan in vitro, 448P
- inhibition by, of prostacyclin formation in rat small intestine and gastric mucosa, 438P
- —, in vitro effects of, on human polymorphonuclear cells and lymphocyte migration, 347
- -, effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- comparison of responses to, on rat tracheal, bronchial and lung strips in vitro, 71
- effect of, on actions of bradykinin and oxytocin on isolated whole uterus and myometrium of rat during oestrus. 21
- —, effect of, on blood flow in, and on rejection of rabbit skin grafts, 123
- effect of, on release of thromboxanes and prostaglandins from guinea-pig lung by slow reacting substance of anaphylaxis, 211
- —, treatment of *E. coli* endotoxin shock in dog with, 185 **Inflammation**, prostacyclin, a potential mediator of, 437P **Inflammatory exudation**, effects of  $\alpha$  and  $\beta$ -adrenoceptor agonists on, in rabbit and guinea-pig skin, 447P

Inflammatory stimuli, particulate, effects of, on extracellular release of prostaglandins and lysosomal enzymes from mouse peritoneal macrophages in vitro. 448P

**Inotropic responses,** positive, in ventricular myocardium of dog, characterization of adrenoceptors mediating, 53

 to noradrenaline, isoprenaline, tyramine and electrical stimulation, of rat isolated atria, postnatal development, 83

**Insulin**, effect of, on relaxant action of glucagon on rabbit renal arteries, 99

**Intestine**, rabbit, some observations on development of adrenergic innervation in, 247

**Iodide**, disposition and fate of, in rabbit, use of gamma cameras to measure, 468P

**Ion-association,** effect of, on transcorneal transport of drugs, 444P

**Ion-exchange chromatography,** high pressure, assay of picomole quantities of polyamines by, 465P

Ischaemia, effect of, on release of <sup>3</sup>H-purines from [<sup>3</sup>H]-adenine labelled rabbit kidney following sympathetic nerve stimulation, 239

Iris sphincter, mechanism of inactivation of noradrenaline in, implications for  $\beta$ -adrenoceptor-mediated responses, 545

**Isoprenaline**, stimulation by, of acid secretion in rat isolated stomach, 425P

- responses of potassium-depolarized tracheal chain preparations from guinea-pig to, effects of metanephrine and phenoxybenzamine on, 421P
- -, effect of, on anococcygeus muscle of dog, 452P
- —, an indirect effect of, on α-amylase release by amphibian pancreas organ cultures, 472P
- effect of centrally administered, on splanchnic nerve activity in anaesthetized and conscious cats, 393P
- --. effect of pancuronium bromide on effect of, on cardiovascular system of pithed rat, 589
- responses of bovine iris sphincter, tracheal muscle and facial artery to, effect of cocaine on, 545
- -, effect of, on rabbit renal artery, 102
- —, chronotropic and inotropic responses of rat isolated atria to, postnatal development of, 83
- —, comparison of responses to, on rat tracheal, bronchial and lung strips in vitro, 71
- effect of, on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- —, effect of, on efflux of <sup>42</sup>K and <sup>86</sup>Rb from tissue cultures of BC<sub>3</sub>H1 nonfusing muscle cell line, 29
- inhibition of gastric acid secretion induced by, in dog, effects of propranolol, practolol and H35/25 on, 153
- ---, responses of rabbit isolated aortae to, age-related changes in, 229
- vascular response to local injection of, comparison of, in blood-perfused gracilis muscle and hind paw pads of dogs, 253
- estimation of dissociation constants and relative efficacies of, orciprenaline and terbutaline in guinea-pig isolated atria by use of functional antagonism, 420P
- effect of, on inflammatory exudation in guinea-pig and rabbit skin, 447P
- (-)-Isoprenaline, development of a radioreceptor assay for, in plasma, 449P

K

Kainate, effect of, on [3H]-dopamine release from rat striatum in vitro, 429P

**Kainic acid,** action of, on cat motoneurones with emphasis on conductance changes, 384P

**Kaliuresis**, induced by diuretics and sodium loading in rat, effects of prostaglandin synthetase inhibition on, 439P

Ketamine, development of tolerance to, in rats, and significance of hepatic metabolism, 63

, and its metabolites, urinary secretion of, in rat, 401P
 Ketazocine, effect of, on electrically evoked contractions of rat vas deferens, 327

 --, -like opiate agonists, comparison of receptor binding characteristics of, interacting with μ- or κ-receptors, 607

**Kidney,** mouse and rabbit, aspirin, protein transacetylation and inhibition of prostaglandin synthetase in, 353

- —, metabolism and distribution of exogenous histamine in cat, after infusion into portal vein, 109
- rabbit, [³H]-adenine labelled, release of [³H]-purines from, following sympathetic nerve stimulation, and its inhibition by α-adrenoceptor blockade, 239
- rat, ATPase activities in microsomal fractions prepared from, effects of aldosterone and spironolactone on, 408P
- , guinea-pig, localization of [<sup>3</sup>H]-clonidine binding in, 418P

L

Labetalol, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293

(±)-Labetalol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rats, 193

**Laser injury,** ro rat and hamster venules, inhibition by N-acetyl neuramic acid of platelet thrombogenesis induced by, 301

Leptazol, effect of intrapallidal administration of, on headturning evoked by striatal stimulation in rats, 381P Lergotrile, selective affinity of, for rat limbic dopamine

Lergotrile, selective affinity of, for rat limbic dopamine binding sites, 413P

Lesions, of frontal cortex of rat, changes in neurotransmitter systems in subcortical regions, 430P

**Leucine**, effect of, on release of [<sup>3</sup>H]-dopamine from rat striatum *in vitro*, 429P

Levallorphan, enhancement of a nociceptive reaction by, in mice, 91

**Levorphanol**, receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607

- effect of, on electrically evoked contractions of rat vas deferens, 327
- —, effect of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75

Lidocaine, treatment of E. coli endotoxin shock in dog with, 185

**Ligand binding techniques**, use of, to study effect of amphetamine on dopamine receptors and  $\beta$ -adrenoceptors in rat corpus striatum and limbic forebrain, 411P

Limbic area, of rat brain, effect of lesions of frontal cortex on levels of neurotransmitters in, 430P

- Limbic forebrain, rat, effect of acute and chronic amphetamine administration on  $\beta$ -adrenoceptors and dopamine receptors in, 411P
- Limbic membranes, rat, effects of bromocriptine and lergotrile on binding of [3H]-dopamine and [3H]-haloperidol to, 413P
- Lincomycin, effect of, on enterohepatic circulation of norethisterone in rat, 401P
- Lipid metabolism, in rat, effects of somatostatin on, 311 Lipoxidase, effect of on release of prostaglandins and thromboxanes from guinea-pig lung by slow reacting substance of anaphylaxis, 211
- Lithium, pharmacokinetics of, in brain, cerebrospinal fluid and serum of rat, 273
- Liver, lipid composition of, in rat, effects of somatostatin on, 311
- -, metabolism and distribution of exogenous histamine in cat, after infusion into portal vein, 109
- -, rat perfused, a technique for measuring first pass extraction in, 469P
- Liver alcohol dehydrogenase, mammalian, use of, to study interaction between ethanol and chloral hydrate in mice, 400P
- Lofibrate, cholesterol-lowering effect of, effect of vitamin C on, 477P
- Longitudinal muscle, of rat isolated ileum, effects of prostaglandins on contractile action of bradykinin on, 441P
- Lorazepam, ventilatory patterns in surgical patients premedicated with, 458P
- Lower body negative pressure, responses of cardiovascular system to, in rabbits treated with 6-hydroxydopamine,
- -, effect of acute adrenergic neurone blockade on response of cardiovascular system of rabbit to, 443P
- response to, and changes in cardiac output and rate, and blood pressure in trypanosome-infected rabbits, 397P
- Lung, rat isolated, clinically used dyes are inhibitors of prostaglandin E2 inactivation in, 386P
- rat strips in vitro, comparison of drug-induced responses with tracheal and bronchial strips, 71
- metabolism and distribution of exogenous histamine in cat, after infusion into portal vein, 109
- -, guinea-pig, release of prostaglandins and thromboxanes from, by slow reacting substance of anaphylaxis, and its inhibition, 211
- Lymphocyte migration, in vitro effects of non-steroidal antiinflammatory drugs on, 347
- Lysergic acid diethylamide, release of [3H]-noradrenaline from motor adrenergic nerves of rat anococcygeus muscle by, 615
- -, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- Lysosomal enzymes, effects of different particulate stimuli on extracellular release of, in mouse peritoneal macrophages in vitro, 448P

Macrophages, mouse peritoneal, effects of different particulate stimuli on extracellular release of prostaglandins and lysosomal enzymes from, in vitro, 448P

- Magnesium, effect of on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623
- -, effects of, on acid secretion from rat isolated gastric mucosa during stimulation with histamine, pentagastrin, methacholine and dibutyryl cyclic adenosine 3',5'-monophosphate, 359
- —, effect of, on effects of aldosterone and spironolactone on renal ATPase activities, 408P
- Manganese, effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- —, effect of, on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623
- Mecamylamine, effect of, on response evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechol administration, 539
- Mechanical properties, of vascular smooth muscles of rabbit, effects of diltiazem (CRD-401) of, 503
- —, of smooth muscle cells of rabbit superior mesenteric artery, effects of acetylcholine on, 493
- Membrane properties, of smooth muscle cells of rabbit superior mesenteric artery, effects of acetylcholine on,
- of vascular smooth muscles of rabbit, effects of diltiazem (CRD-401) on, 503
- Menstrual fluctuations, in hearing-suggestions for hormone and drug monitoring methods in man, 476P
- Mepyramine, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- effect of, on contracturant action of 2-(2-aminoethyl)thiazole on guinea-pig gall bladder in situ, 219
- -, effect of, on vasoconstriction caused by histamine in rabbit skin grafts, 123
- effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- Mepyramine maleate, effect of, on effect of  $17\beta$ -oestradiol on uterine blood flow in rat, 387P
- Mesenteric artery, cranial, infusion of histamine into, and resulting distribution of metabolites, 109
- vasculature of, comparison in vitro of response of, from duckling and chicken to nervous stimulation and noradrenaline, 415P
- -, rabbit, membrane and mechanical properties of, effects of diltiazem (CRD-401) on, 503
- Metanephrine, effect of, on presynaptic and postsynaptic α-adrenoceptors in isolated cat nictitating membranes,
- —, effect of, on responses to isoprenaline of potassiumdepolarized tracheal chain preparations from guineapig, 421P
- Metaraminol, responses of bovine iris sphincter, tracheal muscle and facial artery to, effect of  $17\beta$ -oestradiol
- Methacholine, effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- —, effect of, on effects of calcium on acid secretion from rat isolated gastric mucosa, 359
- , rat isolated gastric mucosa stimulated by PGE<sub>1</sub>, PGE<sub>2</sub> and endoperoxide analogue U46619 of secretion from, 423P

- —, comparison of responses to, on rat tracheal, bronchial and lung strips in vitro, 71
- **Methadone**, effect of, on uptake and release of 5-hydroxy-tryptamine in rat synaptosomal preparations, 75
- -, antidiuretic effect of, in rat, 167
- Methergoline, demonstration of 5-hydroxytryptamine receptors through inhibition by, in cat pial arteries in vitro, 281
- effect of, on behaviour produced by administration of tranylcypromine and L-tryptophan or tranylcypromine and L-DOPA in rats, 201
- effect of, on behaviour in rat, through effect on 5-hydroxytryptamine receptors, 431P
- Methionine-enkephalin, inhibitory action of, on electrically induced contractions of guinea-pig ileum, antagonistic effect of compound 48/80 on, 511
- Methiothepin, effect of, on behaviour in rat, through effect on 5-hydroxytryptamine and dopamine receptors, 431P
- Methoxamine, effect of, on outflow of [3H]-noradrenaline from rat vas deferens, 418P
- —, effect of, on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- Metiamide, effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- pretreatment with, effect of, on effect of compound 48/80 on inhibitory actions of morphine- and methionine-enkephalin on electrically induced contractions of guinea-pig ileum, 511
- —, effect of, on effect of histamine on tracheal constriction and vasodilatation in dog in situ, 553
- —, effect of, on stimulation of acid secretion in rat isolated stomach by β-adrenoceptor agonists, 425P
- —, blockade of presynaptic α-adrenoceptors by, in mouse vas deferens, 416P
- 5-Methoxy-N,N-dimethyltryptamine, hyperactivity response induced by, in rat, effects of  $\beta$ -adrenoceptor antagonists on, 193
- , effect of, on behavioural response of rats to 5-hydroxytryptamine antagonists, 201
- —, effect of, on behaviour in rat, through effect on 5-hydroxytryptamine receptors, 431P
- 3-Methoxy-4-hydroxyphenol glycol, metabolism of, in rat brain, influence of L-tryptophan and monoamine oxidase inhibitors on, 341
- **β-Methoxyneuramic acid,** effect of, on platelet thrombogenesis induced by laser injury to rat and hamster venules, 301
- 5-Methoxytryptamine, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- N-methyl-D-aspartic acid, action of, on cat motoneurones with emphasis on conductance changes, 384P
- effect of, on recordings from dorsal roots of rat isolated spinal cord, evidence for primary afferent terminals having acidic amino acid receptors, 385P
- 2-Methylhistamine, biphasic inotropic response of guineapig atria to, 387P
- 3-Methylhistamine, biphasic inotropic response of guineapig isolated atria to, 387P

- **4-Methylhistamine**, biphasic inotropic response of guineapig isolated atria to, 387P
- Methylimidazoleacetic acid, radiolabelled, metabolism in vivo and in vitro of, in rat brain, 404P
- t-Methylimidazoleacetic acid, as a metabolite in blood of histamine instilled into small intestine of cat, 109
- 1-Methyl-3-isobutylxanthine, effect of, on cyclic GMP changes induced by muscarinic agonists in mouse neuroblastoma cells. 450P
- Methyl prednisolone, effect of, given at various clock times on cell-mediated immunity to oxazolone, 427P
- α-Methyltryptamine, involvement of 5-hydroxytryptamine and dopamine in behavioural effects of, in rat, 431P
- **5-Methyltryptamine**, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- α-Methyl-p-tyrosine, effect of, on effects of antiepileptic drugs on metabolism of monoamines in rat brain, 407P
- depletion of tissue noradrenaline by, in mouse vas deferens, and effect a twitch responses after field stimulation, 145
- effect of, on behaviour produced by tranylcypromine and L-tryptophan or tranylcypromine and L-DOPA in rats, 201
- Methysergide, effect of, on behaviour produced by administration of translcypromine and L-tryptophan or translcypromine and L-DOPA in rats, 201
- , effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- effect of, on modulation of amphetamine hyperactivity by DPI injected into rat nucleus accumbens, 461P
- —, effect of, on anococcygeus muscle of dog, 452P
- **Metoclopramide**, effects of, on actions of octopamine and catecholamines on single neurones from rat cerebral cortex, 485
- , effect of, on hyperactivity in rat induced by 2-amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene, 434P
- , effect of, on effects of dopamine on vasoconstrictor responses to field stimulation of sympathetic nerves and to exogenous noradrenaline in rabbit isolated ear artery, 527
- (±)-Metoprolol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rats, 193
- Microassay, of polyamines by high pressure ion-exchange chromatography, 465P
- -, simple, for human tissue renin, 455P
- **Micro-iontophoresis**, extracellular and intracellular recording during, 451P
- Monoamine oxidase, role of, in deamination of metabolites of histamine in cat, 109
- Monoamine oxidase inhibition, role of, in behavioural effects of  $\alpha$ -methyltryptamine in rat, 431P
- Monoamine oxidase inhibitors, effect of, on effect of clonazepam on serotoninergic activity in mouse brain, 432P
- , influence of, on catecholamine metabolism in rat brain, 341
- **Monoamines,** effect of lesions of frontal cortex of rat on levels of, 430P
- Monoamines, metabolism of, in rat brain, effect of antiepileptic drugs on, 407P
- Monohydroxytamoxifen, antitumour activity of, compared with tamoxifen in rat, 376P

- contrasting subcellular responses to, and oestradiol benzoate in immature rat uterus, 375P
- **Morphine**, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- , antidiuretic effect of, in rat, tolerance and dependence of, 167
- , adrenocorticotrophic hormone fragments mimic effect of, in vitro, 223
- , selective effects of, on nociceptive responses of thalamic neurones in rat, 137
- —, effect of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75
- --, effect of, on enhancement of a nociceptive reaction by opoid antagonists in mice, 91
- , -like opiate agonists, comparison of receptor binding characteristics of, interacting with  $\mu$  or  $\kappa$ -receptors, 607
- effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- Morphine-enkephalin, inhibitory action of, on electrically induced contractions of guinea-pig ileum, antagonistic effect of compound 48/80 on, 511
- Motoneurones, cat, actions of N-methyl-D-aspartic and kainic acids on, with emphasis on conductance changes, 384P
- Motor activity, monitoring, using doppler shift radar, 471P Motor nerve endings, frog, 4-aminopyridine and evoked transmitter release from, 623
- **Motor nerves,** adrenergic, of rat anococcygeus muscle, release of [<sup>3</sup>H]-noradrenaline from, by lysergic acid diethylamide, tyramine or nerve stimulation, 615
- Mr 1353, receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Mr 2034, receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Mr 2092, receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Mr 2266, enhancement of a nociceptive reaction, by, in mice, 91
- Mucosal cell turnover, in upper gut of mouse and its modification by carbenoxolone, 426P
- Muscarinic agonists, in mouse neuroblastoma cells, effect of a phosphodiesterase inhibitor on cyclic GMP changes induced by, 450P
- Muscarinic receptors, junctional and extrajunctional, potentiation of nerve-induced bladder responses by tetraethyl-ammonium in relation to, 331
- Muscimol, effect of, in a GABA-dependent rotational behaviour model and on [3H]-GABA receptor binding, compared with baclofen, 380P
- effect of intrapallidal administration of, on headturning evoked by striatal stimulation in rats, 381P
- Muscle spindle, afferent activity of, rat isolated phrenic nerve-diaphragm preparation for pharmacological study of, effect of oxotremorine on, 47
- Myenteric plexus, of ileum of rabbit and guinea-pig, factors influencing release of acetylcholine from, 565
- **Myocardium,** ventricular, of dog, characterization of adrenoceptors mediating positive inotropic responses in, 53
- -, water, sodium, potassium and calcium contents of, as

- a measure of assessing corticosteroid involvement in changes in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129
- **Myometrium**, rat, actions of bradykinin and oxytocin on, in oestrus, 21
- **Myotropic action,** of endogenous drugs, on rabbit renal artery, 109

### N

- Nalorphine, effect of, on electrically evoked contractions of rat vas deferens, 327
- receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Naloxone, effect of, on hyperactivity in rat induced by 2-amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene,
- -, enhancement of a nociceptive reaction by, in mice,
- effect of, on electrically evoked contractions of rat vas deferens, 327
- effect of, on depression of excitation of nucleus lateralis neurones by acetylcholine and glutamate by morphine, in rat, 137
- effect of, on antidiuretic effect of morphine or methadone in rat, 167
- effect of, on inhibition by adrenocorticotrophic hormone fragments of electrically evoked contractions of mouse vas deferens in vitro, 223
- [³H]-naloxone, inhibition of binding of, in homogenates of brain and ileal myenteric plexus-longitudinal muscle of guinea-pig, use of, to determine receptor binding characteristics of opiate agonists, 607
- Narcotic analgesic drugs, effects of on electrically evoked contractions of rat vas deferens, 327
- effects of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75
- Natriuresis, induced by diuretics and sodium loading in rat, effects of prostaglandin synthetase inhibition on, 439P
- Neomycin, effect of, on enterohepatic circulation of norethisterone in rat, 401P
- Neostigmine, effect of, on responses evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechol administration, 539
- Nerve plexus, in rat anococcygeus muscle, an electrical and mechanical study of, 173
- Nerve stimulation, extrinsic, effect of, on nerve plexus of rat anococcygeus muscle, effects of hexamethonium and tubocurarine on, 173
- release of [<sup>3</sup>H]-noradrenaline from motor adrenergic nerves of rat anococcygeus muscle by, 615
- Nervous stimulation, comparison in vitro of response of mesenteric arterial vasculature from duckling and chicken to, and noradrenaline, 415P
- Neuroblastoma cells, mouse, effect of a phosphodiesterase inhibitor on cyclic GMP changes induced by muscarinic agonists in, 450P
- Neuroleptic, long-acting, neurochemical effects of treatment with, in rat, 379P

- Neuronal activity, choline uptake and regulation of choline acetyltransferase in relation to, 409P
- Neurones, thalamic, selective effects of morphine on nociceptive responses of, in rat, 137
- —, single, of rat cerebral cortex, comparison of actions of octopamine and catecholamines on, 485
- , of rat cerebral cortex, antagonism by clonidine of responses of, to adenosine, adenosine 5'-monophosphate and adenosine triphosphate, 369
- Neurotransmitter systems, changes in, in subcortical regions, as a result of lesions of frontal cortex of rat, 430P
- Nialamide, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- Nicotine, effects of, on cardiac prostaglandin and platelet thromboxane synthesis, 559
- Nicotinic antagonists, effect of, on response to extrinsic nerve stimulation of nerve plexus of rat anococcygeus muscle, 173
- Nicotinic receptors, presence of, confirmed in BC<sub>3</sub>H1 nonfusing muscle cell line, 29
- Nictitating membrane, isolated cat, differences between presynaptic and postsynaptic α-adrenoceptors in, effects of metanephrine and tolazoline on, 259
- NIH 8152, receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Nociceptive reaction, enhancement of, by opioid antagonists in mice, 91
- Nociceptive responses, of thalamic neurones in rat, selective effects of morphine on. 137
- Non-steroidal anti-inflammatory drugs, in vitro effects of, on human polymorphonuclear cells and lymphocyte migration. 347
- Noxious stimuli, natural, responses of thalamic neurones to, selective effects of morphine on, in art, 137
- Noradrenaline, drugs blocking neuronal uptake of, comparison of effects of, with sympathomimetic effects of pancuronium bromide on cardiovascular system of pithed rat, 489
- forebrain concentration of, effect of dorsal bundle injections of 6-hydroxydopamine on, in rats, 601
- effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- contraction of smooth muscle cells of rabbit superior mesenteric artery by, effect of acetylcholine on, 493
- contraction of smooth muscles of rabbit mesenteric and pulmonary arteries induced by, effect of diltiazem on, 503
- , comparison of actions of, and octopamine on single neurones from rat cerebral cortex, 485
- response of rat cerebral cortex neurones to, effect of clonidine on, 369
- —, metabolism of, in rat brain, influence of L-tryptophan and monoamine oxidase inhibitors on, 341
- —, exogenous, vasoconstrictor responses of rabbit isolated ear artery to, effects of dopamine on, 527
- , inhibitory action of, on electrically induced contractions of guinea-pig ileum, effect of compound 48/80 on, 511
- —, mechanisms of inactivation of, in iris sphincter, tracheal muscle and facial artery of cattle: implications for β-adrenoceptor-mediated responses, 545

- —, effect of, on outflow of [3H]-noradrenaline from rat vas deferens, 418P
- —, effect of exogenous, on overflow of [3H]-noradrenaline from mouse vas deferens, 417P
- , effect of, on electrically induced twitch response of mouse vas deferens, 416P
- metabolism of, in rat brain, effect of antiepileptic drugs on, 407P
- , effect of, on inflammatory exudation in rabbit and guinea-pig skin, 447P
- effect of lesions of frontal cortex of rat on level of, in subcortical regions, 430P
- comparison in vitro of response of mesenteric arterial vasculature from duckling and chicken to, and nervous stimulation, 415P
- —, effect of, on anococcygeus muscle of dog, 452P
- , overflow of, measurement of, in superfused preparations, 464P
- effect of centrally administered, on splanchnic nerve activity in anaesthetized and conscious cats, 393P
- , plasma, effect of SQ14225 on, in conscious normotensive rabbits, 389P
- —, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- —, in rat brain, effect of α-flupenthixol decanoate on, 379P
- -, effect of, on rabbit renal artery, 102
- , partial contraction of rabbit renal arteries by, relaxant action of glucagon on, 99
- , chronotropic and inotropic responses of rat isolated atria to, postnatal development of, 83
- effect of, on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- output of, induced by sodium reduction in rabbit ventricular slices, prevention by guanethidine analogues of, 37
- —, effect of, on efflux of <sup>42</sup>K and <sup>86</sup>Rb from tissue cultures of BC<sub>3</sub>H1 nonfusing muscle cell line, 29
- , level of, in blood, effect of decapitation on, in normal and diabetic rats, 3
- effects of release and depletion of endogenous, on transmission of impulses in mouse vas deferens, 145
- response of spontaneously beating electrically driven atria taken from rats made hypertensive by short-term isolation, corticosteroid involvement in changes in, 129
- —, contractile responses of rabbit isolated aortae to, agerelated changes in, 229
- , effect of, on response of nerve plexus of rat anococcygeus muscle to extrusic nerve stimulation, effect of hexamethonium on, 173
- —, efflux of, from rabbit ventricular slices induced by a low external concentration of sodium, further evidence for prevention by guanethidine of, 163
- , effect of, on release of <sup>3</sup>H-purines from [<sup>3</sup>H]-adenine labelled rabbit kidney following sympathetic nerve stimulation, 239
- , plasma, changes in concentration of, as a measure of release rate, 305
- , role of, in response to electrical stimulation of periarterial nerves to rabbit ileum, 247
- [3H]-noradrenaline, release of, from motor adrenergic nerves of rat anococcygeus muscle by lysergic acid, tyramine or nerve stimulation, 615

- , outflow of, from rat vas deferens, effect of methoxamine on, 418P
- , overflow of, from mouse vas deferens, effect of exogenous noradrenaline on, 417P
- Noradrenergic effect, extinction of active avoidance response in rats may be a. 601
- Noradrenergic responsiveness, of tissues from rats made hypertensive by short-term isolation, corticosteroid involvement in, changes in, 129
- Noradrenergic transmission, modulation of, in rabbit isolated ear artery by dopamine, 527
- Norethisterone, reduction of enterohepatic circulation of, by antibiotics in rat, 401P
- Normetanephrine, metabolism of, in rat brain, influence of L-tryptophan and monoamine oxidase inhibitors on, 341
- Normophine, receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Nucleus accumbens, rat, modulation of amphetamine hyperactivity by DPI injected into, 461P
- Nucleus lateralis neurones, selective effects of morphine on nociceptive responses of, in rat, 137
- Nucleus tractus solitarii, of conscious rats, method for injecting drugs into, 465P

0

- Obesity, in rats, effect of fenfluramine on, a new method for screening of potential antiobesity agents, 442P
- Octopamine, comparison of actions of, and catecholamines on single neurones of rat cerebral cortex, 485
- Oedema, refractory, continuous infusion of frusemide in, in man, 453P
- -, paw, effect of gold salts on, in rat, 462P
- 17β-Oestradiol, effect of, on inhibitory responses to noradrenaline in bovine iris sphincter, tracheal muscle and facial artery, 545
- —, effect of, on uterine blood flow, in rat, effect of hist-amine on, 387P
- Oestradiol benzoate, contrasting subcellular responses to, and monohydroxytamoxifen in immature rat uterus, 375P
- **Oestrogen**, effect of, on uterine blood flow, in rat, effect of histamine on, 387P
- Oestrogen therapy, plasma sex hormone binding globulin and, 456P
- **Oestrus**, actions of bradykinin and oxytocin on isolated whole uterus and myometrium of rat during, 21
- Opiate agonists, comparison of receptor binding characteristics of, interacting with  $\mu$  or  $\kappa$ -receptors, 607
- **Opioid antagonists,** enhancement of a nociceptive reaction by, in mice, 91
- Opioid peptides, endogenous, use of rat vas deferens in specific bioassay for, 327
- Orciprenaline, estimation of dissociation constants and relative efficacies of, isoprenaline and terbutaline in guinea-pig isolated atria by use of functional antagonism, 420P
- Oxazolone, cell-mediated immunity to, effects of corticosteroids given at various clock times on, 427P
- Oxotremorine, effect of a phosphodiesterase inhibitor on

- cyclic GMP changes induced by, in mouse neuroblastoma cells, 450P
- , effect of, on muscle spindle afferent activity of rat isolated phrenic nerve-diaphragm preparation, 47
- (±)-Oxprenolol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rats produced by L-tryptophan. 193
- Oxygen conservation, during diving, in ducks, role of mesenteric vasculature in, 415P
- Oxymetazoline, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- Oxytocin, action of, on isolated whole uterus and myometrium of rat in oestrus, 21

Ρ

- Pancreas, organ cultures of, from amphibia, an indirect effect of isoprenaline on α-amylase from, 472P
- Pancuronium bromide, sympathomimetic effects of, on cardiovascular system of pithed rat: a comparison with effects of drugs blocking neuronal uptake of noradrenaline, 589
- Papaverine, effect of, on mean arterial pressure after infusion into third ventricle of cat, 395P
- ---, effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- effect of, on action of phenylephrine on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog. 53
- Papillary muscle, characterization of adrenoceptors mediating positive inotropic responses in blood perfused, 53
- Pargyline, effect of, on effect of clonazepam on serotoninergic activity in mouse brain, 432P
- , effect of, on effects of antiepileptic drugs on metabolism of monoamines in rat brain, 407P
- Particulate stimuli, effects of, on extracellular release of prostaglandins and lysosomal enzymes from mouse peritoneal macrophages in vitro, 448P
- Paw oedema, kaolin-induced effect of gold salts in, in rat, 453P
- Paw pads, hind, dog, vascular response of, to local injection of dopamine and isoprenaline, 253
- Pempidine, effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- Penicillin G, effect of intrapallidal administration of, on head-turning evoked by striatal stimulation in rats, 381P
- Pentagastrin, inhibition of gastric acid secretion induced by, in dog, effects of propranolol, practolol and H35/25 on, 153
- --, effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- gastric mucosa to electrical field stimulation, 445P

  —, acid secretion induced by, in rat isolated stomach,  $\beta$ -adrenoceptor agonist stimulation of, 425P
- rat isolated gastric mucosa stimulated by, differential inhibition by PGE<sub>1</sub>, PGE<sub>2</sub> and endoperoxide analogue U46619 of secretion from, 423P
- effect of, on effects of calcium on acid secretion from rat isolated gastric mucosa, 359

- Pentazocine, effect of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75
- -, effect of, on electrically evoked contractions of rat vas deferens, 327
- Pentobarbitone, effects of, on pulmonary airways resistance in guinea-pigs and interactions with drugs, 519
- Pentolinium, effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- Periarterial nerves, to rabbit ileum, stimulation of, 247
- Peritoneal macrophages, mouse, effects of different particulate stimuli on extracellular release of prostaglandins and lysosomal enzymes from, in vitro, 448P
- Pethidine, effect of, on electrically evoked contractions of rat vas deferens, 327
- -, effect of, on uptake and release of 5-hydroxytryptamine in rat synaptosomal preparations, 75
- -, effect of, on electrically evoked contractions of rat vas deferens, 327
- Phenazocine, receptor binding characteristic of, in homogenates of brain and ileum of guinea-pig, 607
- Phenobarbitone, effect of, on folate content of rat brain, and antiepileptic effect, 407P
- —, effect of, on development of epileptic kindling in rats,
- —, antiepileptic effect of, in rat, and metabolism of monoamines in brain, 407P
- Phenothiazines, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- Phenoxybenzamine, effect of, on release of <sup>3</sup>H-purines from from [3H]-adenine labelled rabbit kidney following sympathetic nerve stimulation, 239
- -, effect of, on effects of release and depletion of endogenous noradrenaline on transmission of impulses in mouse vas deferens, 145
- -, effect of, on responses to isoprenaline of potassiumdepolarized tracheal chain preparations from guineapig, 421P
- —, effect of, on inflammatory exudation in guinea-pig and rabbit skin, 447P
- —, effect of, on effects of dopamine on vasoconstrictor responses to field stimulation of sympathetic nerves and to exogenous noradrenaline in rabbit isolated ear artery, 527
- -, effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- Phentolamine, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- -, effect of, on response of nerve plexus of rat anococcygeus muscle to extrinsic nerve stimulation, 173
- -, effect of, on action or noradrenaline on efflux of 42K and 86Rb from tissue cultures of BC3H1 nonfusing muscle cell line, 29
- —, effect of, on action of phenylephrine and isoprenaline on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- -, effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- -, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P

- -, effect of, on mean arterial pressure after infusion into third ventricle of cat, 395P
- -, effect of, on anococcygeus muscle of dog, 452P
- -, effect of, on in situ uterus of anaesthetized rat, 444P
- -, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P
- -, effect of, on responses evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechol administration, 539
- -, effect of, on effects of dopamine on vasoconstrictor responses to field stimulation of sympathetic nerves and to exogenous noradrenaline in rabbit isolated ear artery, 527
- effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- Phenylbutazone, in vitro effects of, on human polymorphonuclear cells lymphocyte and migration, 347
- Phenylephrine, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293

  —, effect of, on efflux of <sup>42</sup>K and <sup>86</sup>Rb from tissue cul-
- tures of BC<sub>3</sub>H1 nonfusing cell line, 29
- -, effect of, on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- -, effect of, on blood pressure in conscious normotensive rabbits, 389P
- Phenytoin, effect of, on development of epileptic kindling in rats, 406P
- Phosphodiesterase inhibitor, effect of, on cyclic GMP changes induced by muscarinic agonists in mouse neuroblastoma cells, 450P
- Phrenic nerve-diaphragm preparation, rat isolated, for pharmacological study of muscle spindle afferent activity, effect of oxotremorine on, 47
- Physostigmine, effect of, on effects of electrical stimulation, ion concentrations and drugs on release of acetylcholine from myenteric plexus of ileum of guinea-pig and
  - effect of, on response to electrical stimulation of periarterial nerves to rabbit ileum, 247
- -, effect of, on muscle spindle afferent activity of rat isolated phrenic nerve-diaphragm preparation, 47
- —, effect of, on responses evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechol administration, 539
- Pial artery, of cat in vitro, demonstration of 5-hydroxytryptamine receptors through inhibition by methergoline in, 281
- Picomole quantities, of polyamines, assay of, by high pressure ion-exchange chromatography, 465P
- Picrotoxin, effect of intrapallidal administration of, on head-turning evoked by striatal administration in rats, 381P
- Pilocarpine, effect of a phosphodiesterase inhibitor on cyclic GMP changes induced by, in mouse neuroblastoma cells, 450P
- Pimozide, effect of, on behaviour in rat, through effect on dopamine receptors, 431P
- Pindolol, effect of, on action of isoprenaline and phenylephrine on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- (±)-Pindolol, effect of, on 5-hydroxytryptamine-induced

- hyperactivity response in rat produced by tranylcypromine, 193
- **Piperoxan**, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- effect of, on modulation of amphetamine hyperactivity by DPI injected into rat nucleus accumbens, 461P
- Plasma, changes in concentration of noradrenaline in, as a measure of release rate, 305
- , lipid composition of, in rat, effect of somatostatin on, 311
- —, development of a radioreceptor assay for β-adrenoceptor antagonists in, 449P
- Plasma renin, levels of, changes in, of normotensive and spontaneously hypertensive rats with increasing age, 392P
- **Platelets,** thrombogenesis of, induced by laser injury to rat and hamster venules, inhibition by *N*-acetyl neuramic acid of, 301
- , blood, n-butylimidazole as a potent and selective inhibitor of thromboxane synthetase in 435P
- , human, synthesis of thromboxane in, effect of nicotine
   on 559
- Polyamines, assay of picomole quantities of, by high pressure ion-exchange chromatography, 465P
- Polymorphonuclear cells, and lymphocyte migration, in vitro effects of non-steroidal anti-inflammatory drugs on, 347
- Portal vein, blood leaving, presence of histamine metabolites in, in cat, 109
- —, dog, perfused vascular bed of, response of, to histamine and 5-hydroxytryptamine, 581
- Potassium, content of, in myocardium, as a measure of assessing corticosteroid involvement in changes in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129
- tracheal chain preparations depolarized by, a study of, in guinea-pig, 421P
- , effect of, on effect of glycine on release of [3H]-dopamine from dendrites of rat substantia nigra, 428P
- contraction of smooth muscle cells of rabbit superior mesenteric artery by, effect of acetylcholine on, 493
- contraction of smooth muscles of rabbit mesenteric and pulmonary arteries induced by, effect of diltiazem on, 503
- —, supplement of, influence of, on diuretic responses to frusemide administration in normal subjects, 285
- —, contractile responses of rabbit isolated aortae to, agerelated changes in, 229
- <sup>42</sup>Potassium, action of different transmitters on transmembrane efflux from tissue cultures of BC<sub>3</sub>H1 non-fusing muscle cell line, 29
- **Practolol**, effect of, on salbutamol- and isoprenaline-induced inhibition of gastric acid secretion in dog, 153
- —, effect of, on stimulation of acid secretion in rat isolated stomach by  $\beta$ -adrenoceptor agonists, 425P
- (+)-Practolol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rats, 193
- Prednisolone, a domiciliary study of urinary circadian rhythms in rheumatoid patients with particular reference to effects of time of administration of, 453P
- -, therapy with, time of, 457P
- -, effect of, on extra-cellular release of lysosomal

- enzymes from mouse peritoneal macrophages induced by asbestos and zymosan in vitro, 448P
- **Primidone**, effect of, on folate content of rat brain, and antiepileptic effect, 407P
- Probenicid, effect of, on effect of clonazepam on serotoninergic activity in mouse brain, 432P
- Procaine, effect of, on effect of glutamate on release of [3H]-dopamine from rat striatum in vitro, 429P
- **Progesterone**, effect of, on *in situ* uterus of anaesthetized rat, 444P
- Prolactin, plasma, influence of sodium and potassium supplements on, after frusemide administration in normal subjects, 285
- Promazine, effect of infusion of, into distal aorta of rat on perfussion pressure, 389P
- Promethazane, effect of, on anococcygeus muscle of dog, 452P
- **Propranolol**, effect of, on vasodilatation in hind paw pads of dog produced by isoprenaline, 253
- —, effect of, on salbutamol- and isoprenaline-induced inhibition of gastric acid secretion in dog, 153
- effect of, on action of noradrenaline on efflux of <sup>42</sup>K and <sup>86</sup>Rb from tissue cultures of BC<sub>3</sub>H1 nonfusing cell line, 29
- , effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- —, cardiovascular effects of, in spontaneously hypertensive rat, inhibitory role for adrenals in, 391P
- , effect of, on mean arterial pressure after infusion into third ventricle of cat. 395P
- effect of, on response of cardiovascular system to lower body negative pressure in rabbits treated with 6-hydroxydopamine, 396P
- effect of, on modulation of amphetamine hyperactivity by DPI injected into rat nucleus accumbens, 461P
- -, effect of, on anococcygeus muscle of dog, 452P
- -, effect of, on in situ uterus of anaesthetized rat, 444P
- effect of, on effects of pentobarbitone and urethane on pulmonary airways resistance in guinea-pigs, 519
- response of potassium-depolarized tracheal chain preparations from guinea-pig to, 421P
- β-adrenoceptor blockade induced by, bronchoconstricting action of intravenous prostaglandin F<sub>2α</sub> after, in guinea-pig, 422P
- —, effect of, on stimulation of acid secretion in rat isolated stomach by  $\beta$ -adrenoceptor agonists, 425P
- effect of, on actions of octopamine and catecholamines on single neurones from rat cerebral cortex, 485
- (-)-Propranolol, effect of, on behaviour produced by administration of tranyleypromine and L-tryptophan or tranyleypromine and L-DOPA in rats, 201
- , development of a radioreceptor assay for, in plasma, 449P
- (+)-Propranolol, effect of, on salbutamol- and isoprenaline-induced inhibition of gastric acid secretion in dog, 153
- (±)-Propranolol, effect of, on responses evoked by electrical stimulation of forelimb muscles of anaesthetized rat induced to convulse by catechole administration, 539
- Prostacyclin, recirculation of, in dog, 315
- —, a potential mediator of inflammation, 437P
- -, is produced in whole blood, 436P

- inhibition by indomethacin of formation of, in rat small intestine and gastric mucosa, 438P
- -, see prostaglandin I<sub>2</sub>, 481

Prostaglandin  $\vec{E}_2$ , inactivation of, in rat isolated lung, clinically used dyes are inhibitors of 386P

**Prostaglandin**  $\mathbf{F}_{2\alpha}$ , effect of, on rat isolated whole uterus and myometrium, during oestrus, 21

- evidence for a vagosympathetic bronchodilator reflex initiated by, in guinea-pig, 422P
- —, plasma concentration of, in endotoxin-treated dogs, effects of lidocaine and indomethacin on, 185
- —, contraction of rabbit isolated aortae produced by, agerelated changes in effect of isoprenaline on, 229

Prostaglandin I<sub>1</sub>, recirculation of, in dog, 315

- (prostacyclin), synthesis of, by endothelial cells, effects of sulphinpyrazone and aspirin on, 481
   is produced in whole blood, 436P
- —, a potential mediator of inflammation, 437P

Prostaglandin 15-hydroxydehydrogenase, sulphasalazine as a potent inhibitor of, possible basis for therapeutic action in ulcerative colitis, 6

Prostaglandin synthetase, inhibition of, effects of, on natriuresis induced by diuretics and sodium loading in rat, 439P

 , inhibition of, aspirin and protein transacetylation in mouse and rabbit kidney, 353

Prostaglandins, release of, from guinea-pig lung by slow reacting substance of anaphylaxis, and its inhibition, 211

- role of, in changes in blood flow in rabbit skin grafts,
   123
- —, effects of, on rabbit renal artery, 102
- —, are not essential in experimental fever of rats, 439P
- effects of different particulate stimuli on extracellular release of, from mouse peritoneal macrophages in vitro, 448P
- , and contractile action of bradykinin on longitudinal muscle of rat isolated ileum, 441P
- —, synthesis of, in rabbit heart, effects of nicotine on, 559

Prostaglandins E<sub>1</sub> and E<sub>2</sub>, differential inhibition by, of secretion from rat isolated gastric mucosa stimulated by histamine, pentagastrin and methacholine, 423P

**Prothrombin complex,** activity of, relationship between, and vitamin  $K_1$  metabolism in rabbit, 399P

Protein transacetylation, aspirin and inhibition of prostaglandin synthetase in mouse and rabbit kidney,

Pulmonary airways resistance, in guinea-pigs, effects of pentobarbitone and urethane on, and their interactions with drugs, 519

Pulmonary artery, rabbit membrane and mechanical properties of, effects of diltiazem (CRD-401) on, 503

Purinergic innervation, of anococcygeus muscle, evidence for, in rat and rabbit, 13

3H-purines, release of, from [3H]-adenine labelled rabbit kidney following sympathetic nerve stimulation, and its inhibition by α-adrenoceptor blockade, 239

Pyrazole, use of, to study interaction between chloral hydrate and ethanol in mice, 400P

2-Pyridylethylamine, biphasic inotropic response of guineapig isolated atria to, 387P

Ω

Quinacrine, fluorescence histochemical localization of, to reveal innervation of rat and rabbit anococcygeus muscle, 13

R

Rabbit aorta contracting substance, release of, from guineapig lung by slow reacting substance of anaphylaxis, 211

Radioreceptor assay, development of, for  $\beta$ -adrenoceptor antagonists in plasma, 449P

Rate meter, for detection of digital plateau, 474P

**Receptor binding characteristics,** comparison of, of opiate agonists interacting with  $\mu$ - or  $\kappa$ -receptors, 607

μ-receptors, comparison of receptor binding characteristics of opiate agonists interacting with, 607

κ-receptors, comparison of receptor binding characteristics of opiate agonists interacting with, 607

Renal arteries, rabbit, relaxant action of glucagon in, 99 Renal function, impaired, influence of, on disposition of [14C]-fazadinium in anaesthetized greyhound, 402P

Renin, human tissue, a simple microassay for, 455P

 , plasma levels of, changes in, of normotensive and spontaneously hypertensive rats with increasing age, 392P

Reserpine, effect of, on effect of methoxamine on outflow of [3H]-noradrenaline from rat vas deferens, 418P

- effect of, on actions of phenylephrine and tyramine on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- behavioural depression induced by, in mice, effect of caesium chloride on, 9
- depletion of tissue noradrenaline by, in mouse vas deferens, and effect on twitch responses after field stimulation, 145

Rheumatoid arthritis, patients with, a domiciliary study of urinary circadian thythms in, with particular reference to effects of time of administration of corticosteroid drugs, 453P

Rifampicin, effect of, on enterohepatic circulation of norethisterone by, in rat, 401P

Rotational behaviour model, GABA-dependent, drug effects in a, studies with enantiomers of baclofen HCl, 380P

86Rubidium, action of different transmitters on transmembrane efflux from tissue cultures of BC<sub>3</sub>H1 nonfusing muscle cell line, 29

s

Salmefamol, stimulation by, of acid secretion in rat isolated stomach, 425P

Salbutamol, stimulation by, of acid secretion in rat isolated stomach, 425P

 inhibition of gastric acid secretion induced by, in dog, effects of propranolol, practolol and H35/25 on, 153

Serotoninergic activity, altered, in mouse brain induced by clonazepam, 432P

Serum, rat, pharmacokinetics of lithium in, 273

Sex hormone binding globulin, plasma and oestrogen therapy, 456P

Skin, rabbit and guinea-pig, effects of  $\alpha$ - and  $\beta$ -adrenoceptor agonists on inflammatory exudation in, 447P

Skin grafts, rabbit, changes in blood flow and mediator content of, 123

Slow reacting substance of anaphylaxis, release of prostaglandins and thromboxanes from guinea-pig lung by, and its inhibition, 211

Small intestine, rat, inhibition of prostacyclin formation in, by indomethacin, 438P

-, dog, effect of glucagon on, 475P

—, metabolism and distribution of exogenous histamine in cat after infusion into, 109

**Smooth muscle**, of isolated cat nictitating membranes, effects of metanephrine and tolazoline on, 259

 three bovine preparations of, mechanisms of inactivation of noradrenaline in, implications for β-adrenoceptor-mediated responses, 545

 vascular rabbit, effects of diltiazem (CRD-401) on membrane and mechanical properties of, 503

Smooth muscle cells, of rabbit superior mesenteric artery, effects of acetylcholine on membrane and contractile properties of, 493

Social isolation, in young rat: neurochemical effects of treatment with a long-acting neuroleptic, α-flupenthixol decanoate, 379P

Sodium, supplement of, influence of, on diuretic responses to frusemide administration in normal subjects, 285

 low external concentration of, further evidence for prevention by guanethidine of noradrenaline efflux from rabbit ventricular slices by, 163

 content of, in myocardium, as a measure of assessing corticosteroid involvement in changes in noradrenergic responsiveness of tissues from rats made hypertensive by short-term isolation, 129

 low concentrations of, in rabbit ventricular slices, prevention by guanethidine analogues of output of noradrenaline induced by, 37

 effect of, on effect of aldosterone and spironolactone on renal ATPase activities, 408P

 effect of, on receptor binding characteristics of opiate agonists interacting with μ- or κ-receptors, 607

Sodium cromoglycate, model system, use of, in determining effect of ion-association on transcorneal transport of drugs, 444P

Sodium loading, and diuretics, in rat, effects of prostaglandin synthetase inhibition on natriuresis induced by, 439P

Sodium nitroprusside, effect of, on blood pressure in conscious normotensive rabbits, 389P

Sodium salicyclate, in vitro effects of, on human polymorphonuclear cells and lymphocyte migration, 347

**Somatostatin,** effects of, on gastric acid secretion and on lipid and carbohydrate metabolism in rat, 311

(±) Sotalol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rat produced by tranylcypromine, 193

**Spermidine**, assay of picomole quantities of, by high pressure ion-exchange chromatography, 465P

Spermine, assay of picomole quantities of, by high pressure ion-exchange chromatography, 465P

Spinal cord, rat, primary afferent terminals of, do they have acidic amino acid receptors?, 385P

**Spionolactone**, effect of, on renal ATPase activities, 408P [ ${}^{3}$ H]-spiperone, use of, as ligand, in study of effect of amphetamine on  $\beta$ -adrenoceptors and dopamine receptors in rat corpus striatum and limbic forebrain, 411P

 binding of, to striatal preparations in presence or absence of dopamine, effect of chronic administration of trifluoperazine on, in rats, 414P

Splanchnic nerve, activity of, in anaesthetized and conscious cats, effect of centrally administered noradrenaline and isoprenaline on, 393P

-, in rabbit ileum, 247

SQ 14225, effect of, on baroreceptor reflex sensitivity in conscious normotensive rabbit, 389P

 --, effect of, on fluid intake in DOCA/salt hypertensive rats, 390P

St 91, effect of, on response of cardiovascular system of rabbit to lower body negative pressure, 443P

Steroid therapy, time of, 457P

Stilboestrol, effect of, on in situ uterus of anaesthetized rat, 444P

Stomach, rat isolated, calcium dependence of basal and secretagogue-induced acid secretion in 424P

—, rat isolated, β-adrenoceptor agonist stimulation of acid secretion in, 425P

Striatal membranes, rat, effects of bromocriptine and lergotrile on binding of [<sup>3</sup>H]-dopamine and [<sup>3</sup>H]-haloperidol to, 413P

Striatal stimulation, in rats, effects of intrapallidal administration of convulsant drugs on head-turning evoked by, 381P

Striatum, rat, effects of (+)- and (-)-enantiomers of 2-amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene on dopamine uptake and dopamine receptors in, 433P

—, rat, in vitro, amino acid-induced stimulation of [<sup>3</sup>H]-dopamine release from, 429P

**Strontium**, effect of, on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623

Strychnine, effect of, on effect of glycine on release of [<sup>3</sup>H]-dopamine from dendrites of rat substantia nigra, 428P

Substance P, effect of, on rabbit renal artery, 102

Substantia nigra, rat dendrites of, specific stimulation of [3H]-dopamine release from, by glycine, 428P

 effects of lesions of frontal cortex of rat on level of neurotransmitters in, 430P

Succinylcholine, response of muscle spindle afferent discharges from rat isolated phrenic nerve-diaphragm preparation, 47

Sucrose, effect of, on prevention by guanethidine analogues of output of noradrenaline induced by sodium reduction in rabbit ventricular slices, 37

**Sulphasalazine,** as a potent inhibitor of prostaglandin 15-hydroxydehydrogenase, possible basis for therapeutic action in ulcerative colitis, 6

Sulphinpyrazone, effects of, on prostaglandin I<sub>2</sub> (prostacyclin) synthesis by endothelial cells, 481

Sulpiride, (+)- and (-)-enantiomers of, effects of, on ADTN-induced hyperactivity in rat, 434P

Superfused preparations, measurement of noradrenaline

- overflow and dopamine- $\beta$ -hydroxylase activity in, 464P
- Superior mesenteric artery, rabbit, smooth muscle cells of, effects of acetylcholine on membrane and contractile properties of, 493
- Sympathetic efferent nerves, in anaesthetized cat, effect of atenolol on discharge of 394P
- Sympathetic nerve, stimulation of, release of  ${}^{3}$ H-purines from [ ${}^{3}$ H]-adenine labelled rabbit kidney following, and its inhibition by  $\alpha$ -adrenoceptor blockade, 239
- Sympathetic nerves, vasoconstrictor responses of, to field stimulation in rabbit isolated ear artery, effects of dopamine on, 527
- Sympathomimetic effects, of pancuronium bromide on cardiovascular system of pithed rat: a comparison with effects of drugs blocking neuronal uptake of noradrenaline, 589
- Synaptosomes, rat preparations of, effects of narcotic analgesics on uptake and release of 5-hydroxytryptamine in. 75

1

### Т

- **Tachycardia**, induced by isoprenaline or salbutamol mediated by  $\beta_2$ -adrenoceptor-mediated vasodilatation,
- Tamoxifen, antitumour activity of, compared with monohydroxytamoxifen in rat, 376P
- Taurine, effect of, on effect of glycine on release of [<sup>3</sup>H]-dopamine from dendrites from rat substantia nigra, 428P
- Telemethylhistamine, radiolabelled, metabolism in vivo and in vitro of, in rat brain, 404P
- **Temperature**, effect of, on effects of phenylephrine on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53
- **Terbutaline**, estimation of dissociation constants and relative efficacies of, isoprenaline and orciprenaline in guinea-pig isolated atria by use of functional antagonism, 420P
- Tetracaine, effect of, on prevention by guanethidine analogues of output of noradrenaline induced by sodium reduction in rabbit ventricular slices. 37
- **Tetraethylammonium**, effect of, on *in situ* uterus of anaesthetized rat, 444P
- , effect of, on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623
- potentiation of nerve-induced bladder responses by, in relation to junctional and extrajunctional muscarinic receptors, 331
- **Tetrodotoxin**, effect of, on relaxation in response of rat and rabbit anococcygeus muscle to field stimulation produced by guanethidine, 13
- effect of, on acid secretory responses of rat isolated gastric mucosa to electrical field stimulation, 445P
- —, effect of, on effect of glutamate on release of [3H]-dopamine from rat striatum in vitro, 429P
- effect of, on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623
- , effect of, on responses of rat bladder to tetraethylammonium, 331

- **Thalamic neurones**, selective effects of morphine on nociceptive responses of, in rat, 137
- **Thalamus**, discussion of possibility of a direct action of intravenous morphine in, of rat, 137
- **Theophylline**, effect of, on relaxant action of glucagon on rabbit renal arteries, 99
- **Thioridazine**, potential of, as an antischizophrenic agent, in dexamphetamine-induced EGG arousal test model in rats, 410P
- **Thrombogenesis,** platelet, inhibition by *N*-acetyl neuramic acid of, induced by laser injury to rat and hamster venules, 301
- **Thromboxane**, synthesis of, in platelets, effects of nicotine on, 559
- **Thromboxane synthetase**, 1-*n*-butylimidazole, a potent and selective inhibitor of, 435P
- **Thromboxanes,** release of, from guinea-pig lung by slow reacting substance of anaphylaxis, and its inhibition, 211
- **Thymol blue**, is an inhibitor of prostaglandin E<sub>2</sub> inactivation in rat isolated lung, 386P
- **Thymoxamine**, effect of, on effect of electrical stimulation on release of acetylcholine from myenteric plexus of ileum of guinea-pig and rabbit, 565
- effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- (±)-Timolol, effect of, on 5-hydroxytryptamine-induced hyperactivity response in rat produced by tranylcypromine, 193
- **Tolazoline**, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- effect of, on presynaptic and postsynaptic α-adrenoceptors in isolated cat nictitating membranes, 259
- **Trachea,** rat strips *in vitro*, comparison of drug-induced responses with bronchial and lung strips, 71
- dog, musculature and vasculature of, pharmacological analysis of histamine receptors in, in situ, 553
- **Tracheal chain preparations,** guinea-pig, a study of potassium-depolarized, 421P
- **Tracheal muscle**, mechanism of inactivation of noradrenaline in, implications for  $\beta$ -adrenoceptor-mediated responses, 545
- Transacetylation, protein, aspirin, and inhibition of prostaglandin synthetase in mouse and rabbit kidney, 353
- Transmitter release, evoked, from frog motor nerve endings, and 4-aminopyridine, 623
- **Tranylcypromine**, 5-hydroxytryptamine-induced hyperactivity response in rats produced by, effects of  $\beta$ -adrenoceptor antagonists on, 193
- and L-tryptophan, administration of, in rats, effects of putative 5-hydroxytryptamine antagonists on behaviour produced by, 201
- —, effect of, on effect of clonazepam on serotoninergic activity in mouse brain, 432P
- Triacylglycerols, mechanism by which fenfluramine and benfluorex could inhibit synthesis of, 377P
- Trichloroethanol, metabolism of, in mice, 400P
- Triethylphosphine gold chloride, effect of, on adjuvantinduced arthritis and kaolin-induced paw oedema in rat, 462P
- Trifluoperazine, ongoing chronic (six months) administra-

tion of, to rats, supersensitivity of cerebral dopamine receptors during, 414P

Triflupromazine, effect of infusion of, into distal aorta of rat on superfusion pressure, 389P

Trypanosome, rabbits infected with, changes in blood pressure, cardiac output and rate, and response to lower body negative pressure in, 397P

Tryptophan, in mouse brain, effect of clonazepam on, 432P Tryptamine, and tranyleypromine, effects of putative 5-hydroxytryptamine antagonists on behaviour produced by administration of, in rats, 201

, effect of infusion of, into distal aorta of rat on perfusion pressure, 389P

L-Tryptophan, 5-hydroxytryptamine-induced hyperactivity response in rats produced by, effects of  $\beta$ -adrenoceptor antagonists on, 193

, and tranyleypromine, administration of, in rats, effects of putative 5-hydroxytryptamine antagonists on behaviour produced by, 201

, effect of, on effect of monoamine oxidase inhibitors on behaviour in rat, 431P

influence of, on catecholamine metabolism in rat brain, 341

(+)-Tubocurarine, effect of intrapallidal administration of. on head-turning evoked by striatal stimulation in rats.

, effect of, on muscle spindle afferent activity of rat isolated phrenic nerve-diaphragm preparation, 47

effect of, on effect of 4-aminopyridine on transmitter release from frog motor nerve endings, 623

-, effect of, on action of carbachol on efflux of 42K and <sup>86</sup>Rb from tissue cultures of BC<sub>3</sub>H1 nonfusing muscle cell line, 29

Tubocurarine, effect of, on response to extrinsic nerve stimulation of nerve plexus of rat anococcygeus muscle, 173

Twitch response, electrically induced, in mouse vas deferens, effect of metiamide on, 416P

Twitch responses, of field stimulated mouse vas deferens. effects of endogenous noradrenaline release and depletion on, 145

Tyramine, effect of, compared with that of pancuronium bromide on cardiovascular system of pithed rat, 589 , release of [3H]-noradrenaline from motor adrenergic

nerves of rat anococcygeus muscle by, 615 chronotropic and inotropic responses of rat isolated

atria to, postnatal development of, 83

. effect of, on adrenoceptors mediating positive inotropic responses in ventricular myocardium of dog, 53

. effect of, on release of endogenous noradrenaline from mouse vas deferens, and on twitch responses after field stimulation, 145

U

U46619, endoperoxide analogue, inhibition by, of secretion from rat isolated gastric mucosa stimulated by histamine, pentagastrin and methacholine, 423P

Ulcerative colitis, possible basis for therapeutic action of sulphasalazine, a potent inhibitor of prostaglandin 15-hydroxydehydrogenase, on, 6

Urethane, effects of, on pulmonary airways resistance in guinea-pigs and interaction with drugs, 519

Uric acid, plasma, influence of sodium and potassium supplements on, after frusemide administration in normal subjects, 285

Urinary circadian rhythms, a domiciliary study of, in rheumatoid patients with particular reference to effects of time of administration of corticosteroid drugs, 453P

Urinary excretion, of ketamine and its metabolites in rat, 401 P

of fazadinium, in anaesthetized greyhound, 402P

Urine, metabolism and distribution of exogenous histamine in cat, after infusion into portal vein, 109

Uterus, of anaesthetized rat, effects of adrenoceptor and ganglion blocking agents on in situ, 444P

-, rat, regulation of blood flow in, histamine involvement in. 387P

-, immature rat, contrasting subcellular responses to monohydroxytamoxifen and oestradiol benzoate in,

-, isolated whole rat, actions of bradykinin and oxytocin on, in oestrus, 21

Vagosympathetic bronchodilator reflex, evidences for, initiated by prostaglandin F<sub>27</sub> in guinea-pig, 422P

Vas deferens, rat, use of, in bioassay for endogenous opioid peptides, 327

-, mouse, effect of exogenous noradrenaline on overflow of [3H]-noradrenaline from, 417P

 rat, effect of methoxamine on outflow of [<sup>3</sup>H]-noradrenaline from, 418P

mouse, blockade of presynaptic x-adrenoceptors by metiamide, 416P

rat, perfused, analysis of response of, to field stimulation, 467P

mouse, effects of release and depletion of endogenous noradrenaline on transmission of impulses in, 145

taken from rats made hypertensive by short-term isolation, response of, to noradrenaline and noradrenergic nerve stimulation, corticosteroid involvement in changes in, 129

mouse, electrically evoked contractions of, effect of adrenocorticotrophic hormone fragments on, in vitro, 223

Vascular bed, hepatic arterial and portal venous, of dog, responses of simultaneously perfused, to histamine and 5-hydroxytryptamine, 581

Vasoactive agents, presence of, in homogenates of rabbit skin homografts and autografts, correlation of, with changes in blood flow, 123

 age-related changes in response of rabbit isolated aortae to, 229

Vasoconstriction, role of histamine in, in rabbit skin grafts. 123

produced by dopamine in hind paw pads of dog, effect of haloperidol on, 253

Vasoconstrictor agents, age-related changes in response of rabbit isolated aortae to, 229

Vasoconstrictor responses, to field stimulation of sympathe-

tic nerves and to exogenous noradrenaline, effects of dopamine on, in rabbit isolated ear artery, 527

Vasodilatation, β<sub>2</sub>-adrenoceptor-mediated, tachycardia induced by salbutamol or isoprenaline mediated by, 153

- —, role of histamine and H<sub>2</sub>-receptors in, in rabbit skin grafts, 123
- produced by dopamine in hind paw pads of dog, effect of haloperidol on, 253

Vasodilator agents, age-related changes in response of rabbit isolated aortae to, 229

Vasodilator dopamine receptors, localization of, in canine hindlimb, 253

Vasopressin, effect of, on rabbit renal artery, 102

Ventilatory patterns, in surgical patients premedicated with lorazepam or diazepam, 458P

Ventilatory response, to CO<sub>2</sub>, effect of diazepam on threshold of, 454P

Ventricular slices, rabbit, prevention by guanethidine analorazepam or diazepam, 458P reduction in, 37

—, rabbit, further evidence for prevention by guanethidine of noradrenaline efflux from, induced by a low external concentration of sodium, 163

Venules, rat and hamster, laser injury to, inhibition by N-acetyl neuramic acid of platelet thrombogenesis induced by, 301

Vitamin C, and cholesterol-lowering effect of lofibrate, 477P

Vitamin K<sub>1</sub>, metabolism of, relationship between, and prothrombin complex activity in rabbit, 399P

### w

Warfarin, mechanism of action of, in rabbit, 399P

### х

**Xylazine**, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293

### Υ

- Yohimbine, effect of, on twitch response produced by electrical stimulation of cholinergic nerves supplying longitudinal muscle of guinea-pig ileum, 293
- effect of, on inhibition by tyramine of twitch responses of mouse vas deferens to field stimulation, 145
- effect of, on electrically induced twitch response of mouse vas deferens inhibited by clonidine, 416P

### Z

**Zymosan**, effect of, on extracellular release of prostaglandins and lysosomal enzymes from mouse peritoneal macrophages in vitro, 448P

## INSTRUCTIONS TO AUTHORS

Papers will be considered for publication on all aspects of drug action, including chemotherapy. A recent issue of the Journal is a good guide to style.

Manuscripts (two copies) should be sent to Dr A. Ungar, Department of Pharmacology, University of Edinburgh Medical School, 1 George Square, Edinburgh, EH8 9JZ, from whom copies of the full Instructions to Authors, published in *Br. J. Pharmac.* 50, 3–23, may also be obtained. Specific points to note are:

- 1. Manuscript should be typed in double spacing on one side of paper not larger than A4 ( $206 \times 294$  mm). There should be a separate title page giving the names and addresses of the authors in alphabetical order. One first name of each author may be included. A short title of not more than 50 letters should also be suggested.
- 2. Statement Papers are accepted only if accompanied by a statement that they have not been and will not be published in whole or in part in any other Journal.
- 3. Summary (2 copies) This should be a short summary of results and conclusions arranged in numbered paragraphs.
- 4. Abstract (2 copies) An abstract of about 100 words suitable for inclusion in an abstracting journal should be typed on a separate sheet, giving the author's name and address and the title of the paper.
- 5. Figures These should not be larger than A4 ( $206 \times 294$  mm) 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. Lettering on figures should be inserted in pencil. Symbols which are to appear in figures or legends should be chosen from the following:



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

- 6. Tables These should not have more than 85 characters to a line (counting spaces between columns as 4 characters) and certainly not more than 110 characters to a line, unless absolutely unavoidable. Figure legends and tables should be typed on separate sheets of paper.
- 7. References These should be collected in alphabetical order at the end of the paper. They should include the authors' names, year of publication (in brackets), 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.

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.

Short Communications These may be accepted if they merit priority publication and do not require revision. They may contain up to 1,200 words of text and only one figure or table. The summary should be a single paragraph. An abstract and statement should be included.

# **British Journal of Pharmacology**

### **VOLUME 64 NUMBER 4 DECEMBER 1978**

### SHORT COMMUNICATION

481 GORDON, J.L. & PEARSON, J.D. Effects of sulphinpyrazone and aspirin on prostaglandin I<sub>2</sub> (prostacyclin) synthesis by endothelial cells

### **PAPERS**

- 485 HICKS, T.P. & McLENNAN, H. Comparison of the actions of octopamine and catecholamines on single neurones of the rat cerebral cortex
- 493 KURIYAMA, HIROSI & SUZUKI, HIKARU

  The effects of acetylcholine on the membrane and
  contractile properties of smooth muscle cells of the
  rabbit superior mesenteric artery
- 503 ITO, YUSHI, KURIYAMA, HIROSI & SUZUKI, HIKARU The effects of diltiazem (CRD-401) on the membrane and mechanical properties of vascular smooth muscles of the rabbit
- 511 KAMIKAWA, YUICHIRO & SHIMO, YASUO Antagonistic effect of compound 48/80 on the inhibitory actions of morphine and methionine-enkephalin on electrically-induced contractions of the guinea-pig ileum
- 519 ADVENIER, C., BOISSIER, J.R., HO, S., MAL-LARD, B. & RUFF, F. The effects of pentobarbitone and urethane on pulmonary airway resistance in guinea-pigs and their interactions with drugs
- 527 HOPE, WENDY, McCULLOCH, MARIAN W., RAND, M.J. & STORY, D.F. Modulation of noradrenergic transmission in the rabbit ear artery by dopamine.
- 539 ANGEL, A. & DEWHURST, D.G. A pharmacological investigation of the electrically evoked convulsive activity induced by administration of catechol in the anaesthetized rat

- 545 KALSNER, STANLEY Mechanisms of inactivation of noradrenaline in the iris sphincter, tracheal muscle and facial artery of cattle: implications for  $\beta$ -adrenoceptor-mediated responses
- 553 HIMORI, N. & TAIRA, N. Pharmacological analysis of histamine receptors in musculature and vasculature of the dog trachea in situ
- 559 WENNMALM, ÅKE Effects of nicotine on cardiac prostaglandin and platelet thromboxane synthesis
- 565 COWIE, A. LOUISE, KOSTERLITZ, H.W. & WATERFIELD, ANGELA A. Factors influencing the release of acetylcholine from the myenteric plexus of the ileum of the guinea-pig and rabbit
- 581 RICHARDSON, P.D.I. & WITHRINGTON, P.G. Responses of the simultaneously-perfused hepatic arterial and portal venous vascular beds of the dog to histamine and 5-hydroxytryptamine
- 589 DOCHERTY, J.R. & McGRATH, J.C. Sympathomimetic effects of pancuronium bromide on the cardiovascular system of the pithed rat: a comparison with the effects of drugs blocking the neuronal uptake of noradrenaline
- 601 FIBIGER, HANS C. & MASON, STEPHEN T.

  The effects of dorsal bundle injections of 6-hydroxydopamine on avoidance responding in rats
- 607 KOSTERLITZ, H.W. & LESLIE, FRANCES M. Comparison of the receptor binding characteristics of opiate agonists interacting with  $\mu$  or  $\kappa$ -receptors
- 615 McGRATH, J.C. & OLVERMAN, H.J. Release of [<sup>3</sup>H]-noradrenaline from the motor adrenergic nerves of the anococcygeus muscle by lysergic acid diethylamide, tyramine or nerve stimulation
- 623 ILLES, P. & THESLEFF, S. 4-Aminopyridine and evoked transmitter release from motor nerve endings