-LIBRARY

MOV 6 1969 BRITISH JOURNAL OF PHARMACOLOGY NATIONAL INSTITUTES OF HEALTH Volume 37 September 1969 Number 1

Contents

page

CLARKE, D. E., JONES, C. J. and LINLEY, P. A. Histochemical fluorescence studies on noradrenaline BANKS, P., KAPELLER, K. and MAYOR, D. The effects of iproniazid and reserpine on the accumulation

of granular vesicles and noradrenaline in constricted adrenergic nerves Graham, J. D. P., Lever, J. D. and Spriggs, T. L. B. The effect of morphine dependence on the vesicular content of adrenergic nerves in relation to arteriolar smooth muscle in the pancreas of the rat Bhagat, B. and Friedman, Ettan. Factors involved in maintenance of cardiac catecholamine content: relative importance of synthesis and re-uptake

BHAGAT, B. Role of adrenal hormones in the synthesis of noradrenaline in cardiac sympathetic 34 neurones

Chahl, Loris A. and O'Donnell, Stella R. Actions of phenylephrine on β -adrenoceptors in 41

guinea-pig trachea
Bell, C. The pharmacological nature of the response of the reserpinized guinea-pig vas deferens 52

BELL, C. The pharmacological nature of the response of the reserpinized guinea-pig vas deferens to postganglionic nerve stimulation CALNE, D. B., KAROUM, F., RUTHVEN, C. R. J. and SANDLER, M. The metabolism of orally administered L-DOPA in Parkinsonism

BASSETT, J. R., CAIRNCROSS, K. D., HACKET, N. B. and STORY, MARGOT. Studies on the peripheral pharmacology of fenazoxine, a potential antidepressant drug

BREDA, J. B., CARLINI, E. A. and SADER, N. F. A. Effects of chronic administration of (+)-amphetaming on many performance of the rat 57

69

- 79 amine on maze performance of the rat
- GOODRICH, CECILIE A. Effect of monoamineoxidase inhibitors on 5-hydroxytryptamine output from 87 erfused cerebral ventricles of anaesthetized cat SPENCER, P. S. J. and TURNER, T. A. R. Blockade of biogenic amine synthesis: its effect on the
- responses to leptazol and dexamphetamine in rats
 ACETO, M. D., BENTLEY, H. C. and DEMBINSKI, J. R. Effects of ganglion blocking agents on nicotine
- extensor convulsions and lethality in mice BHARGAVA, V. K. and Meldrum, B. S. The strychnine-like action of curare and related compounds
- on the somatosensory evoked response of the rat cortex
- SHARKAWI, MAHMOUD, and GOLDSTEIN, AVRAM. Antagonism by physostigmine of the "running fit" caused by levorphanol, a morphine congener, in mice
 BLACKHAM, A. and SPENCER, P. S. J. The effects of oestrogens and progestins on the response of
- mice to barbiturates
- COLLINS, A. J. and HORLINGTON, M. A sequential screening test based on the running component of audiogenic seizures in mice, including reference compound PD50 values Bradley, P. B., Samuels, Gillian M. R. and Shaw, Jane E. Correlation of prostaglandin release from the cerebral cortex of cats with the electrocorticogram, following stimulation of the reticular formation
- BEITCH, BARBARA R. and EAKINS, K. E. The effects of prostaglandins on the intraocular pressure 158 of the rabbit
- ABITBOL, H., PIULATS, E. and ROSELLO, S. The action of glucosulphone [N,N'-di (glucose sodium sulphonate) of 4,4'-diaminodiphenyl sulphone] on pancreatic kallikrein

 Nielsen, H. M. Kinin forming and destroying activities in human bile and mucous membranes of
- the biliary tract
- 178 STARR, M. S. and West, G. B. Further evidence for the involvement of kinin in anaphylactic shock in the rat BERTACCINI, G., CARO, G. DE, ENDEAN, R., ERSPAMER, V. and IMPICCIATORE, M. The action of
- BERTACCINI, G., CARO, G. DE, ENDEAN, R., ERSPAMER, V. and IMPICCIATORE, M. The action of caerulein on pancreatic secretion of the dog and biliary secretion of the dog and the rat

 ANASTASI, A., BERTACCINI, G., CEI, J. M., CARO, G. DE, ERSPAMER, V. and IMPICCIATORE, M. Structure and pharmacological actions of phyllocaerulein, a caerulein-like nonapeptide: its occurrence in extracts of the skin of Phyllomedusa sauvagei and related Phyllomedusa species

 ABRAMSON, F. B., BARLOW, R. B., MUSTAFA, M. G. and STEPHENSON, R. P. Relationships between chemical structure and affinity for acetylcholine receptors

 BELESLIN, D. B. The action of eledoisin on the peristaltic reflex of guinea-pig isolated ileum of the guinea-pig isolated ileum

 NATOFF, I. L. The pharmacology of the cholinoceptor in muscle preparations of Ascaris lumbricoides

- var. suum
- 258 HOBBIGER, F. and PECK, A. W. Hydrolysis of suxamethonium by different types of plasma
 272 McInnes, Linda, and Parratt, J. R. Studies on the mode of action of hexobendine, a prospective anti-anginal drug
- 283 CALDWELL, A. D. S., MARTIN, A. J. and TRIGGER, D. J. Comparative study of the effect of three antibiotics on renal function BOREHAM, D. R. and MARTIN, B. K. The kinetics of elimination of salicylic acid and the formation
- of gentisic acid
- MOYLAN-JONES, R. J. The effect of a large dose of atropine upon the performance of routine tasks BOTTING, J. H. and TURMER, A. D. Studies on the mode of action of vasopressin on the isolated proximal colon of the guinea-pig CUTHBERT, A. W. and PAINTER, ELISABETH. Capacitance changes in frog skin caused by theophylline 306
- 314 and antidiuretic hormone

CONTENTS

Volume 37 No. 1 September 1969

- 1 CLARKE, D. E., JONES, C. J. and LINLEY, P. A. Histochemical fluorescence studies on nor-adrenaline accumulation by Uptake₂ in the isolated rat heart
- 10 Banks, P., Kapeller, K. and Mayor, D. The effects of iproniazid and reserpine on the accumulation of granular vesicles and noradrenaline in constricted adrenergic nerves
- 19 GRAHAM, J. D. P., LEVER, J. D. and SPRIGGS, T. L. B. The effect of morphine dependence on the vesicular content of adrenergic nerves in relation to arteriolar smooth muscle in the pancreas of the rat
- 24 Bhagat, B. and Friedman, Eitan. Factors involved in maintenance of cardiac catecholamine content: relative importance of synthesis and re-uptake
- 34 Bhagat, B. Role of adrenal hormones in the synthesis of noradrenaline in cardiac sympathetic neurones
- 41 Chahl, Loris A. and O'Donnell, Stella R. Actions of phenylephrine on β -adrenoceptors in guinea-pig trachea
- 52 Bell, C. The pharmacological nature of the response of the reserpinized guinea-pig vas deferens to postganglionic nerve stimulation
- 57 CALNE, D. B., KAROUM, F., RUTHVEN, C. R. J. and SANDLER, M. The metabolism of orally administered L-DOPA in Parkinsonism
- 69 BASSETT, J. R., CAIRNCROSS, K. D., HACKET, N. B. and STORY, MARGOT. Studies on the peripheral pharmacology of fenazoxine, a potential antidepressant drug
- 79 Breda, J. B., Carlini, E. A. and Sader, N. F. A. Effects of chronic administration of (+)-amphetamine on maze performance of the rat
- 87 GOODRICH, CECILIE A. Effect of monoamineoxidase inhibitors on 5-hydroxytryptamine output from perfused cerebral ventricles of anaesthetized cats
- 94 Spencer, P. S. J. and Turner, T. A. R. Blockade of biogenic amine synthesis: its effect on the responses to leptazol and dexamphetamine in rats
- 104 Aceto, M. D., Bentley, H. C. and Dembinski, J. R. Effects of ganglion blocking agents on nicotine extensor convulsions and lethality in mice
- 112 Bhargava, V. K. and Meldrum, B. S. The strychnine-like action of curare and related compounds on the somatosensory evoked response of the rat cortex
- 123 Sharkawi, Mahmoud, and Goldstein, Avram. Antagonism by physostigmine of the "running fit" caused by levorphanol, a morphine congener, in mice
- 129 BLACKHAM, A. and SPENCER, P. S. J. The effects of oestrogens and progestins on the response of mice to barbiturates
- 140 COLLINS, A. J. and HORLINGTON, M. A sequential screening test based on the running component of audiogenic seizures in mice, including reference compound PD50 values
- 151 Bradley, P. B., Samuels, Gillian M. R. and Shaw, Jane E. Correlation of prostaglandin release from the cerebral cortex of cats with the electrocorticogram, following stimulation of the reticular formation
- 158 BEITCH, BARBARA R. and EAKINS, K. E. The effects of prostaglandins on the intraocular pressure of the rabbit
- 168 ABITBOL, H., PIULATS, E. and ROSELLÓ, S. The action of glucosulphone [N,N'-di (glucose sodium sulphonate) of 4,4'-diaminodiphenyl sulphone] on pancreatic kallikrein
- 172 NIELSEN, H. M. Kinin forming and destroying activities in human bile and mucous membranes of the biliary tract
- 178 STARR, M. S. and West, G. B. Further evidence for the involvement of kinin in anaphylactic shock in the rat
- 185 Bertaccini, G., Caro, G. De, Endean, R., Erspamer, V. and Impicciatore, M. The action of caerulein on pancreatic secretion of the dog and biliary secretion of the dog and the rat
- 198 Anastasi, A., Bertaccini, G., Cei, J. M., Caro, G. Df, Erspamer, V. and Impicciatore, M. Structure and pharmacological actions of phyllocaerulein, a caerulein-like nonapeptide: its occurrence in extracts of the skin of *Phyllomedusa sauvagei* and related Phyllomedusa species

VOLUME 37 No. 1 (continued)

- 207 ABRAMSON, F. B., BARLOW, R. B., MUSTAFA, M. G. and STEPHENSON, R. P. Relationships between chemical structure and affinity for acetylcholine receptors
- 234 Beleslin, D. B. The action of eledoisin on the peristaltic reflex of guinea-pig isolated ileum
- 245 Beleslin, D. B. and Rakić, M. M. Stimulant action of tetraethylammonium on the peristaltic reflex of the guinea-pig isolated ileum
- 251 NATOFF, I. L. The pharmacology of the cholinoceptor in muscle preparations of Ascaris lumbricoides var. suum
- 258 HOBBIGER, F. and PECK, A. W. Hydrolysis of suxamethonium by different types of plasma
- 272 McInnes, Linda, and Parratt, J. R. Studies on the mode of action of hexobendine, a prospective anti-anginal drug
- 283 CALDWELL, A. D. S., MARTIN, A. J. and TRIGGER, D. J. Comparative study of the effect of three antibiotics on renal function
- 294 BOREHAM, D. R. and MARTIN, B. K. The kinetics of elimination of salicylic acid and the formation of gentisic acid
- 301 MOYLAN-JONES, R. J. The effect of a large dose of atropine upon the performance of routine tasks
- 306 BOTTING, J. H. and TURMER, A. D. Studies on the mode of action of vasopressin on the isolated proximal colon of the guinea-pig
- 314 CUTHBERT, A. W. and PAINTER, ELISABETH. Capacitance changes in frog skin caused by theophylline and antidiuretic hormone

page

- 325 Vogt, Marthe. Release from brain tissue of compounds with possible transmitter function: interaction of drugs with these substances
- 338 DAVIS, W. G., MACDONALD, D. C. and MASON, D. F. J. The effects of pronethalol and propranolol on the coronary circulation of the dog
- 357 PARRATT, J. R. and Wadsworth, R. M. Myocardial and haemodynamic effects of the betaadrenoceptor blocking drug alprenolol (H56/28) in anaesthetized cats
- 367 Allan, Dorothy, Baird, J. R. C. and Ellis, Kathleen E. J. Interaction between (\pm) -amphetamine and atropine on the rat cardiovascular system
- 371 SCHNEIDER, F. H. Secretion from the cortex-free bovine adrenal medulla
- 380 PAPP, J. GY. and WILLIAMS, E. M. VAUGHAN. The effect of bretylium on intracellular cardiac action potentials in relation to its anti-arrhythmic and local anaesthetic activity
- 391 PAPP, J. Gy. and WILLIAMS, E. M. VAUGHAN. A comparison of the anti-arrhythmic actions of I.C.I. 50172 and (-)-propranolol and their effects on intracellular cardiac action potentials and other features of cardiac function
- 400 Summers, R. J. Effects of monoamine oxidase inhibitors on the hypothermia produced in cats by halothane
- 414 TURKANIS, S. A. Some properties of the denervated anterior gracilis muscle of the rat
- 425 BRIMBLECOMBE, R. W., HUNT, R. R., RICKARD, R. L., and TAYLOR, JOAN V. The synthesis and pharmacology of some 1,4,5,6-tetrahydropyrimidines
- 436 FENNESSY, M. R., HEIMANS, R. L. H. and RAND, M. J. Comparison of effect of morphine-like analgesics on transmurally stimulated guinea-pig ileum
- 450 Hunt, J. N. and Lallemand, R. C. Sedative properties of simple analgesics
- 459 CHOWDHURY, A. K., ROGERS, H., SKINNER, A., SPECTOR, R. G. and WATTS, D. C. The influence of psychotropic drugs on aldolase, mitochondrial malic dehydrogenase and Mg++Na+K+ adenosine triphosphatase
- 468 CALNE, D. B. and WEBSTER, R. A. Tremor induced by tetrabenazine
- 476 SMITH, S. E. Uptake of antimony potassium tartrate by mouse liver slices
- 485 Selye, H., Mécs, I. and Tamura, T. Effect of spironolactone and norbolethone on the toxicity of digitalis compounds in the rat
- 489 REILLY, MARGARET A. and SCHAYER, R. W. Enhancement of inflammation and histamine formation by actinomycin D
- 497 BABABUNMI, E. A. and BASSIR, O. The effect of aflatoxin on blood clotting in the rat

Proceedings of the British Pharmacological Society, Manchester, 4–5 September, 1969

- 501P HUGHES, B. O. and SPICER, BARBARA. Some anticholinergic activities of BRL 1288—a new anti-Parkinson drug
- 502P STEVENSON, I. H. and TURNBULL, M. J. The effect of chronic barbitone administration and withdrawal on the sensitivity of the central nervous system to barbiturate
- 503P JOYCE, C. R. B., MALPAS, ANN, ROWAN, J. and SCOTT, D. F. Behaviour and EEG are affected on the day after hypnotic doses of nitrazepam and amylobarbitone sodium
- 504P IRESON, J. D. Opioid and muscarinic anti-nociception
- 505P MARSHALL, I. and Weinstock, Marta. A quantitative method for the assessment of physical dependence on narcotic analgesics in mice
- 506P SILVERMAN, A. P. Behavioural effects of a "smoking dose" of nicotine in rats
- 507P BLYTHER, S. and MARRIOTT, A. S. The effects of drugs on the hyper-reactivity of rats with bilateral anterior hypothalamic lesions
- 508P BLACKHAM, A. and SPENCER, P. S. J. Interactions of oestrogenic and progestational steroids with dexamphetamine and fencamfamin in mice
- 509P Buckley, G. A., Heading, Christine E. and Taylor, K. Ambient temperature and thermal responses to hexamethonium in the mouse
- 510P Brown, D. A., Halliwell, J. V. and Scholfield, C. N. Nicotine uptake by isolated rat ganglia
- 511P Brown, D. A., Brownstein, M. J. and Scholfield, C. N. On the nature of the drug-induced after hyperpolarization in isolated rat ganglia
- 513P GILLESPIE, J. S., MACLAREN, A. and POLLOCK, D. A method of stimulating different segments of the sympathetic and parasympathetic outflows from the spinal cord in the pithed rat
- 514P WESTFALL, D. P. The effect of decentralization and reserpine-treatment on the sensitivity of the isolated vas deferens of the guinea-pig to stimulant drugs
- 515P POSNER, J. The inhibitory innervation of the bovine iris sphincter

- 516P Hughes, J. and Roth, R. H. Enhanced release of transmitter during sympathetic nerve stimulation in the presence of angiotensin
- 517P DAY, M. D. and OWEN, D. A. A. Inhibition of angiotensin pressor responses with diethyl-dithiocarbamate (DDC)
- 518P DALE, M. M. and ZILLETTI, L. The anaphylactic reaction in the longitudinal muscle strip of guinea-pig ileum
- 519P METCALFE, HELEN L. and TURNER, P. Pharmacological studies of cinanserin in human isolated smooth muscle
- 521P GLEN-BOTT, MARY, IMMS, F. J., JONES, M. T. and PAPADAKI, LUCIENNE. The influence of adrenocortical insufficiency on cardiac muscle
- 522P BUCKLEY, G. A. and JORDAN, C. C. Two types of adrenoreceptor in the isolated frog heart
- 523P Grayson, J., Irvine, Mona, and Parratt, J. R. The effects of carbochromen on myocardial blood flow and metabolic heat production before and after acute coronary ligation
- 524P PARRATT, J. R. and Wadsworth, R. M. The effect of "selective" beta-receptor blocking drugs on the myocardial circulation
- 526P ALLEN, J. D., SHANKS, R. G. and ZAIDI, S. A. A comparison of the effects of bretylium, lignocaine and propranolol on experimental cardiac arrhythmias
- 527P AELLIG, W. H., PRICHARD, B. N. C. and RICHARDSON, G. A. The acute exercise test for the preliminary evaluation of β -receptor blocking drugs in angina pectoris
- 528P Ross, G. Cardiovascular actions of glucagon and secretin
- 528P SOMANI, S. M., CALVEY, T. N. and WRIGHT, ANTOINETTE. The excretion of hydroxyphenyl-trimethylammonium in bile
- 529P EDWARDS, K., JACKSON, H. and JONES, A. R. A possible explanation for the varied effects of sulphonic acid diesters on spermatogenesis
- 531P Jones, A. R. and Jackson, H. Chemosterilant action of trimethylphosphate in rodents
- 532P COOPER, E. R. A. and Jackson, H. Effects of ethylene dimethanesulphonate on reproductive function in rats
- 532P CARLYLE, R. F. The occurrence of pharmacologically active substances in, and the action of drugs on, preparations of the sea anemone Actinia equina
- 533P Hope, D. B. and Watkins, W. B. Isolation of a new oxytocic peptide from bovine posterior pituitary lobes
- 535P MAEGRAITH, B. G. and ONABANJO, A. O. The involvement of histamine in malaria
- 536P CHURCH, M. K. and JAMES, G. W. L. A model to demonstrate the inhibition by dexamethasone of anaphylactic bronchoconstriction
- 527P DALY, M. J., LIGHTOWLER, NORAH M. and WILLIAMS, J. R. B. Pulmonary mechanical changes in experimental bronchitis
- 538P RANG, H. P. and RITTER, J. M. Disulphide bond reduction in nicotinic receptors
- 539P Rider, J. and Thomas, S. The effect of theophylline on sodium transport across frog-skin in the absence of chloride
- 540P Massingham, R. The mechanism of potentiation of inotropic responses to phenylephrine by theophylline
- 541P BARDSLEY, W. G., HILL, C. M. and LOBLEY, R. W. A reinvestigation of the substrate specificity of pig kidney diamine oxidase
- 542P Schnieden, H. An apparatus for measuring passive resistance to movement of the forearm in man
- 543P WILSON, T. R. and WHITTAKER, D. K. Stress-induced oral and gastric ulcers in rats
- 544P BUCKINGHAM, R. E., CLARK, W. G. B., NICHOLS, B. and REES, J. M. H. Electroanaesthesia as a pharmacological technique
- 545P SMALL, R. C. and WESTON, A. H. Spontaneous and drug-induced electrical changes in longitudinal muscle strips from the rabbit duodenum
- 546P BALASUBRAMANIAM, K., MAWER, G. E. and RODGERS, E. MARGARET. The estimation of amylobarbitone and hydroxyamylobarbitone in serum by gas liquid chromatography
- 547P HEDGES, ANNMARIE, and TURNER, P. Beta-receptors in human isolated smooth muscle
- 548P Ankier, S. I. and Tyers, M. B. A technique for the continuous micro-infusion of chemicals into discrete parts of the brain in unrestrained rats
- 550P Sweetman, A. J. and Weetman, D. F. Polarographic assay of monoamine oxidase
- 551P CARNEY, I. The evaluation of anaphylactic bronchoconstrictor effects induced by intravenous and aerosol challenge in the anaesthetized guinea-pig
- 552P GCDDARD, C. J. H. The quantitative evaluation of skin reactions in cases of delayed hypersensitivity
- 553P HEADING, CHRISTINE E. Cholinesterases and cholinacetylase in the nervous system of the rat

- 555 BARLOW, R. B. and THOMPSON, G. M. (and, in part, Scott, N. C.). The affinity and activity of compounds related to nicotine on the rectus abdominis muscle of the frog (*Rana pipiens*)
- 585 Bennett, T. The effects of hyoscine and anticholinesterases on cholinergic transmission to the smooth muscle cells of the avian gizzard
- 595 LOCKETT, MARY F. and WADLEY, ROSALIE. Renal actions of dihydroergocristine and of phentolamine in anaesthetized rats
- 609 Somani, Pitambar. Study on some selective β-adrenoreceptor blocking effects of 1-(4-nitrophenyl)-1-hydroxy-2-methyl isopropylaminoethane (α-methyl INPEA)
- 618 HARRISON, D. C., PIRAGES, SUELLEN, ROBISON, SHERILYN C. and WINTROUB, B. U. The pulmonary and systemic circulatory response to dopamine infusion
- 627 IVERSEN, L. L. and LANGER, S. Z. Effects of phenoxybenzamine on the uptake and metabolism of noradrenaline in the rat heart and vas deferens
- 638 LIGHTMAN, S. L. and IVERSEN, L. L. The role of Uptake₂ in the extraneuronal metabolism of catecholamines in the isolated rat heart
- 650 HADLEY, MAC E. and GOLDMAN, JOEL M. Effects of cyclic 3',5'-AMP and other adenine nucleotides on the melanophores of the lizard (*Anolis carolinensis*)
- 659 Rosengren, Elsa, and Svensson, S. E. Histamine formation in rat gastric mucosa and lung after injecting reserpine or adrenaline
- 666 EMMELIN, N., OHLIN, P. and THULIN, A. The pharmacology of salivary myoepithelial cells in dogs
- 680 SNEDDON, J. M. Sodium-dependent accumulation of 5-hydroxytryptamine by rat blood platelets
- 689 Curzon, G. and Green, A. R. Effects of immobilization on rat liver tryptophan pyrrolase and brain 5-hydroxytryptamine metabolism
- 698 Laity, J. L. H. The release of prostaglandin E₁ from the rat phrenic nerve-diaphragm preparation
- 705 HORTON, E. W. and JCNES, R. L. (with an addendum by HOPKIN, JUDY M. and HORTON, E. W.).
 Prostaglandins A₁, A₂ and 19-hydroxy A₁; their actions on smooth muscle and their inactivation on passage through the pulmonary and hepatic portal vascular beds
- 723 Graeff, F. G., Pelá, Irene R. and Rocha E Silva, M. Behavioural and somatic effects of bradykinin injected into the cerebral ventricles of unaesthetized rabbits
- 733 FOWLER, J. S. L. Carbon tetrachloride metabolism in the rabbit
- 738 GOWER, P. E. and DASH, C. H. Cephalexin: human studies of absorption and excretion of a new cephalosporin antibiotic
- 748 FILDERMAN, R. B. and KOVACS, B. A. Anti-inflammatory activity of the steroid alkaloid glycoside, tomatine
- 756 Index to Volume 37