

# British Journal of Pharmacology

PROCEEDINGS OF THE BRITISH PHARMACOLOGICAL SOCIETY

University of London, 4th-6th January 1978

- 321 O'DONNELL, STELLA R. & PERSSON, C.G.A.  $\beta$ -Adrenoceptor mediated inhibition by terbutaline of histamine effects on vascular permeability
- 325 GREEN, A.R. Repeated exposure of rats to the convulsant agent flurothyl enhances 5-hydroxy-tryptamine- and dopamine-mediated behavioural responses
- 333 OHGA, A. & TANEIKE, T.  $H_1$ - and  $H_2$ -receptors in the smooth muscle of the ruminant stomach
- 339 COX, B. & LEE, T.F. Is acetylcholine involved in a dopamine receptor mediated hypothermia in mice and rats?
- 349 HARRIS, J.B. & ZAR, M.A. The effects of a toxin isolated from Australian tiger snake (*Notechis scutatus scutatus*) venom on autonomic neuromuscular transmission
- 362 BUCKINGHAM, R.E., HAMILTON, T.C. & ROBSON, D. Diminishing hypotensive effect of increasing doses of pindolol in DOCA/saline hypertensive rats
- 364 CARLSÖÖ, BENGT, DANIELSSON, ÅKE & HENRIKSSON, ROGER Effects of a new selective  $\beta_1$ -adrenoceptor agonist on amylase secretion from the rat parotid gland
- 367 FRANDSEN E.K., KRISHNA G.A. & SAID S.I. Vasoactive intestinal polypeptide promotes cyclic adenosine 3',5'-monophosphate accumulation in guinea-pig trachea
- 370 BISSET, G.W., CHOWDREY, H.S. & FELDBERG, W. Release of vasopressin by enkaphalin
- 373P PROCEEDINGS OF THE BRITISH PHARMACOLOGICAL SOCIETY, London, 4-6 January 1978
- SHORT COMMUNICATIONS**
- 359 ITO, S., NAKAZATO, Y. & OHGA A. Pharmacological evidence for the involvement of  $Na^+$  channels in the release of catecholamines from perfused adrenal glands

- 373P AL-JEBOORY, A. & MARSHALL, R.J. Relaxant effects of dopamine and isoprenaline on canine isolated coronary arteries—relationship to cyclic AMP production
- 374P BLACK, JUDITH L. (introduced by EINSTEIN, ROSEMARIE) The actions of indoramin on isolated artery preparations
- 375P WORCEL, M. Mechanism of action of hydralazine and ISF 2123 on arterial smooth muscle
- 376P GODFRAIND, T. The action of cinnarizine on noradrenaline-sensitive calcium influx and efflux in vascular smooth muscle
- 376P RICHARDSON, P.D.I. & WITHRINGTON, P.G.  $\alpha$ - and  $\beta$ -adrenoceptors in the hepatic portal venous vascular bed of the dog
- 377P CAULFIELD, M.P. (introduced by BROWN, D.A.) Receptors mediating hyperpolarizing responses to catecholamines in rat superior cervical ganglia
- 378P BUSIS, N.A., SCHULMAN, J.A., SMITH, P.A. & WEIGHT, F.F. (introduced by WALKER, R.J.) Do cyclic nucleotides mediate slow postsynaptic potentials in sympathetic ganglia?
- 379P SCHOLTYSIK, G. (introduced by BERDE, B.) Dopamine receptor mediated inhibition by bromocriptine of accelerator nerve stimulation effects in the pithed cat
- 380P DOGGRELL, S.A. & PATON, D.M. Effect of labetalol on adrenergic transmission in the rat anococcygeus muscle
- 380P IDOWU, O.A. & ZAR, M.A. Factors influencing the inhibitory effectiveness of clonidine on adrenergic transmission: the relationship between clonidine-induced inhibition and the duration of interval between stimuli
- 381P DREW, G.M. Modulation of noradrenergic transmission by the presynaptic  $\alpha$ -inhibitory feedback process in the rat heart
- 382P MARSHALL, I., NASMYTH, P.A. & SHEPPERSON, N.B. Presynaptic  $\alpha$ -adrenoceptors and [ $^3\text{H}$ ]-noradrenaline overflow from the mouse vas deferens
- 383P DUBOCOVICH, MARGARITA L., LANGER, S.Z. & PELAYO, F. Effect of cyclic nucleotides on  $^3\text{H}$ -neurotransmitter release induced by potassium stimulation in the rat pineal gland
- 384P CAMBRIDGE, D., DAVEY, M.J. & MASSINGHAM, R. The effect of sympathetic nerve stimulation on [ $^3\text{H}$ ]-prazosin release in rabbit pulmonary arteries
- 385P CLOUGH, D.P., HATTON, R., PETTINGER, S.J., SAMUELS, GILLIAN M.R., & SHAW, A. Substituted aryl-tetrahydro-pyrrolo imidazoles: a new class of centrally acting antihypertensives
- 386P PETTY, M.A. & REID J.L. Changes in tyrosine hydroxylase and phenylethanolamine N-methyl transferase activity in individual brain nuclei during the development of renovascular hypertension in the rat
- 387P COX B.M. Stimulus-response relationships in ileum preparations from normal and morphine treated guinea-pigs
- 388P HUGHES, J., KOSTERLITZ, H.W., ROBSON, LINDA E. & WATERFIELD, ANGELA A. The inhibitory effects of clonidine on the contractions of the guinea-pig ileum in the morphine-dependent and withdrawn states
- 389P KUMAR, R., MUMFORD, L. & TEIXEIRA, A.R. Sexual behaviour in morphine-dependent rats
- 390P IVERSEN, S.D. & JOYCE, E.M. Effect in the rat of chronic morphine treatment on the behavioural response to apomorphine
- 391P MORICHI, R. & PEPEU, G. A study of the potentiation of morphine antinociception by hydroxyzine in the rat
- 392P ELY, N., RUMBLE, I.R. & SHARMAN, D.F. Some observations on the behavioural responses to metoclopramide in the pig and the guinea-pig
- 393P RIDLEY, R.M. (introduced by CROW, T.J.) The behavioural effects of (+)-amphetamine and apomorphine in the marmoset
- 394P COSTAIN, D.W., GRAHAME-SMITH, D.G. & GREEN, A.R. Relevance of the enhanced 5-hydroxytryptamine behavioural responses in rats to electroconvulsive therapy
- 395P JATON, A.L., LOEW, D.M. & VIGOURET, J.M. A comparison of apomorphine, bromocriptine and Sandoz CM29-712 (6-methyl-8 $\alpha$ -cyanomethyl-ergoline-1) in four different turning models in the rat
- 396P HOWLETT, D.R. & NAHORSKI, S.R. Binding of  $^3\text{H}$ -neuroleptics to dopamine receptors on rat cerebral membranes
- 396P CHIU, A., ECCLESTON, D. & PALOMO, T. Drug induced supersensitivity and choline acetyltransferase (ChA) activity in the rat striatum
- 398P ATTERWILL, C.G. & PRINCE, A.K. (introduced by BROWNLEE, G.) Choline uptake, choline acetyltransferase and the acetylation of choline in chick and rat brain
- 399P BELL, R. & COOPER, S.J. Exploratory locomotor response habituation: dissociable effects of (+)-amphetamine and (–)-amphetamine

- 400P LIVINGSTON, A. & WATERMAN, A.E. Effects of bile duct ligation on ketamine anaesthesia in the rat
- 400P CAIRNCROSS, K.D., COX, B., KERWIN, R., FORSTER, CHRISTINE & WREN, ALLISON F. Behavioural changes induced by olfactory bulb ablation and intrabulbar injection of 5,6-DHT: susceptibility to psychotropic drugs
- 402P CARTER, C.J. & PYCOCK, C.J. Studies on the role of catecholamines in the frontal cortex
- 402P BEVAN, P., BRADSHAW, C.M., PUN, R.Y.K., SLATER, N.T. & SZABADI, E. The effect of desipramine on neuronal responses to tyramine and noradrenaline in the cerebral cortex
- 403P JONES, R.S.G. & ROBERTS, M.H.T. Potentiation of monoamine responses of denervated cells by a noradrenaline uptake inhibitor (viloxazine)
- 404P MIREYLEES, S.E. & SUGRUE, M.F. Effects of mazindol on the *in vitro* uptake of monoamines by the rat brain
- 405P CONWAY, ELIZABETH L., JARROT, B. & LOUIS, W.J. (introduced by BEART, P.M.) Effect of acute  $\alpha$ -methyldopa administration on catecholamine levels in anterior hypothalamic-preoptic and medullary nuclei in rat brain
- 406P MANN, S.P. (introduced by SHARMAN, D.F) Measurement of tyrosine hydroxylase in the guinea-pig brain
- 407P FUENMAYOR-T, L. (introduced by VOGT, MARTHE) The effect of fasting on the formation of 4-hydroxy-3-methoxyphenyl-acetic acid (homovanillic acid) and 5-hydroxyindolylacetic acid in the brain of the mouse
- 408P CROSS, A.J., GLOVER, VIVETTE, LOFT-HOUSE, R. & OWEN, F. (introduced by CROW, T.J.) Some observations on human brain monoamine oxidase
- 409P ASSUMPÇÃO, J.A., DACKE, C.G. & DAVIDSON, N. Calcium-dependent release of isotopically labelled  $\gamma$ -aminobutyric acid (GABA) from rat dorsal medulla *in vivo*
- 410P GALVAN, M. & SCHOLFIELD, C.N. (introduced by BROWN, D.A.) Depolarizing actions of  $\gamma$ -aminobutyric acid (GABA) on mammalian brain slices
- 411P BOURA, A.L.A. & MURPHY, R.D. Some factors affecting inactivation of prostaglandin  $E_2$  ( $PGE_2$ ) by the rat isolated perfused lung
- 412P ELLENDORFF, F., FORSLING, MARY L., PARVIZI, NAHID, SMIDT, D., TAVERNE, M. & WILLIAMS, H. Prostaglandin  $F_{2\alpha}$  administration and oxytocin release in the pig and miniature pig
- 413P BOUGHTON-SMITH, N.K., VANE, J.R. & WHITTLE, B.J.R. Effects of prostacyclin ( $PGI_2$ ),  $PGI_1$  and 6-oxo- $PGF_{1\alpha}$  on the rat gastric mucosa
- 413P HILL, T.W.K. & MONCADA, S. The renal haemodynamic and excretory actions of prostacyclin ( $PGI_2$ )  $PGI_1$  in anaesthetized dogs
- 414P DUSTING, G.J., MONCADA, S. & VANE, J.R. Disappearance of prostacyclin ( $PGI_2$ ) in the circulation of the dog
- 415P HOULT, J.R.S. & MOORE, P.K. Enzyme in rabbit kidney converts prostaglandin  $F_{2\alpha}$  directly to prostaglandin  $E_2$  *in vitro*
- 416P HOULT, J.R.S. & MOORE, P.K. Thyroxine-induced hyperthyroid state in rats suppresses renal prostaglandin metabolism
- 417P BONTA, I.L. & PARNHAM, M.J. Time-dependent pro- and anti-inflammatory effects of prostaglandin (PG)  $E_1$  on the experimental granulomata in rats
- 418P MacINTYRE, D.E., WESTWICK, J. & WILLIAMS, T.J. Comparison of the effects of prostaglandin analogues on rabbit platelets, rabbit isolated vascular tissues and rabbit skin microvasculature
- 420P LEWIS, G.P. & MANGHAM, BEVERLEY A. Changes in blood flow, histamine and prostaglandin  $E_2$  in rabbit skin grafts
- 421P PALMER, R.M.J. & WEATHERALL, M. Lysosomal enzyme release from leucocytes by N-formyl-L-methionyl-L-leuyl-L-phenylalanine *in vitro*: effect of some anti-inflammatory drugs
- 422P LEFORT, J. & VARGAFTIG, B.B. Mechanisms of collagen-induced bronchoconstriction and thrombocytopenia in the guinea-pig
- 423P BEETS, J.L., MEADE, H. & MORLEY, J. Anti-allergy properties of PRD-92-Ea
- 423P CUNNINGHAM, F.M., FORD-HUTCHINSON, A.W., SMITH, M.J.H. & WALKER, J.R. Effects of D-penicillamine and levamisole on delayed hypersensitivity reactions in the rat and mouse
- 424P CLARKE, G., LINCOLN, D.W. & SCHOOT, P.v.d. Neuropharmacological studies on the central inhibition of oxytocin release
- 425P FILE, SANDRA E. & HYDE, J.R.G. Piracetam—a non-sedative anxiolytic drug?
- 426P BEATTY, R.C. & MARTIN, K.J. Antagonistic effects of two anaesthetics on hypotonic haemolysis
- 427P HEWICK, D.S. & SHAW, V. The importance of the intestinal microflora in nitrazepam metabolism in the rat

- 428P GOODFORD, P.J. The interaction of some bis-aryl compounds with sites of known structure on human and horse haemoglobin
- 430P DAVIES, J. & TONGROACH, P. Microelectrophoretic effects of *cis*-1,3-aminocyclohexane carboxylic acid on nigral neurones in control and tetanus toxin treated rats
- 431P BOWERY, N.G. & NEAL, M.J. Release of [ $^3\text{H}$ ]-*cis*-3-aminocyclohexanecarboxylic acid ([ $^3\text{H}$ ]-ACHC) from central neurones
- 431P EVANS, R.H. Measurement of the antagonism of glycine by strychnine in the immature rat spinal cord *in vitro*
- 432P JAMES, VICTORIA A. & WALKER, R.J. Structure-activity studies on an excitatory glutamate receptor of leech neurones
- 433P DAVIES, J. & WATKINS, J.C. Specific antagonism of amino acid-induced and dorsal root evoked synaptic excitation of Renshaw cells
- 434P SCHOLFIELD, C.N. (introduced by BROWN, D.A) A potentiation of inhibition by various anaesthetics in the isolated olfactory cortex
- 435P BLOOM, S., IVERSEN, L.L. & QUIK, M. Effect of vasoactive intestinal peptide (VIP) and other neuropeptides on cAMP accumulation in brain slices
- 436P MASSEY, S. & NEAL, M.J. Dependence of potassium stimulated release of [ $^3\text{H}$ ]-acetylcholine from the retina on high affinity choline uptake
- 437P TERRAR, D.A. The influence of caffeine on the rate of decay of end-plate currents in frog skeletal muscle
- 438P CALDWELL, J. CROFT, JANE E. & SMITH, R.L. On the mechanism of tolerance to phenobarbitone: evidence against a role for enzyme induction
- 439P BARLOW, R.B. Limits to equipotent molar ratios
- 440P HARRIS, A.L. (introduced by GRAHAME-SMITH, D.G) A study in the guinea-pig of the pharmacokinetics and pharmacodynamics of cytosine arabinoside
- 441P BACK, D.J. BRECKENRIDGE, A.M., CHALLINER, M., CRAWFORD, FRANCESCA E., ORME, M.L'E, ROWE, P.H. & SMITH, EILEEN. The interaction of antibiotics with synthetic steroids in the rat
- 442P CLARK, E.R., DIX, C.J., JORDAN, V.C., PRESTWICH, G. & SEXTON, S. A comparison, at the cellular and sub-cellular levels, of the effect of tamoxifen and oestradiol benzoate on the immature rat uterus
- 443P NGAI, H.K., WONG, P.Y.D. & YEUNG, C.H. Action of  $\alpha$ -chlorhydrin on transporting functions of the rat cauda epididymis
- 444P GOTTRUP, F. & ØRNSHOLE, J. (introduced by DALY, M.J.) The effect of a new  $\beta_2$ -adrenoceptor agonist, salmefamol, on pentagastrin-induced gastric acid secretion in conscious dogs
- 445P CANFIELD, S.P., CURWAIN, B.P., KING, J.A. & PRICE, CAROLYN. Salmefamol: inhibitor or stimulant of gastric acid secretion?
- 445P ANGUS, J.A., BLACK, J.W. & STONE, M. Comparative assay of histamine  $\text{H}_2$ -receptor antagonists using the isolated mouse stomach
- 447P MARSHALL, I. An inhibitory histamine  $\text{H}_2$ -receptor in the mouse vas deferens
- 448P CONWAY, J., HATTON, R. & KEDDIE, J. Haemodynamic response to converting enzyme inhibitor and Saralasin in salt-depleted dogs; relation to plasma renin activity
- 449P NAYLER, WINIFRED, G. The pharmacological protection of mitochondrial function in hypoxic heart
- 450P BERESFORD, ROSEMARY A. (introduced by McQUEEN, E.G.) Lack of correlation between strength of contractions and oxygen consumption of drug-treated, directly-stimulated rat diaphragm
- 451P DAVIES, J.A. (introduced by NICHOLSON, A.N.) Studies in the monkey (*Macaca mulatta*) on the effect of ( $\pm$ )-6-fluorotryptophan and ( $\pm$ )-*p*-chlorophenylalanine of plasma tryptophan
- 453P HOUSE, F.R. (introduced by RÖGERS, H.J.) Confidence intervals for pharmacokinetic parameters
- 453P TAIT, J.F. & TAIT, S.A.S. (introduced by HOBBIER, F.) An *in vitro* bioassay for aldosterone (and corticosterone) output stimulating substances
- 454P BENDER, D.A. & SMITH, W.R.D. (introduced by HOBBIER, F.) Benserazide effects on tryptophan metabolism in mice
- 455P COBON, A.M., LILLY, L.J. & NEWTON, M.F. (introduced by HOBBIER, F.) Development of a technique for the rapid screening of chemicals for carcinogenicity
- 456P GINSBERG, L. (introduced by HOBBIER, F.) Effects of general anaesthetic agents on membrane conductance and surface potential
- 458P HUTCHINGS, R.T., LIEBERMAN, GRETA E. & SABIKOWSKI, Z.T. (introduced by LEWIS, G.P) Measurement of cell aggregation and shape change by transmitted and scattered light through a cell suspension (Dual Channel Cell Monitor)

- 460P ANGUS, J.A. & BLACK, J.W. Production of acid secretion in the mouse isolated stomach by electrical field stimulation
- 461P DUTRA, A.A.N., EISEN, V. & GINGELL, D. Effects of bradykinin on uptake and release of substances by mouse peritoneal macrophages
- 461P EISEN, V. & WALKER, D.I. Effect of ionizing radiation on prostaglandin 15-OH-dehydrogenase (PGDH)
- 462P BANNIS, HEATHER, BLATCHFORD, D., GODDEN, URMA, HOLZBAUER, MARGARETHA, MANN, S.P. & SHARMAN, D.F. Pituitary dopamine in rats after decreased water intake
- 462P WILCOX, C.S. A denervated dog's kidney preparation for studying renin release into blood and lymph
- 463P HARDCASTLE, J., HARDCASTLE, P.T. & SANDFORD, P.A. (introduced by HOBBIER, F.) Modification of transport processes across rat intestine
- 464P PECK, M.J. & WILLIAMS, T.J. (introduced by LEWIS, G.P.) Prostacyclin ( $\text{PGI}_2$ ) potentiates bradykinin-induced plasma exudation in rabbit skin
- 465P MARSHALL, I., NASMYTH, P.A. & SHEPPERSON, N.B. A comparison of 3 methods used for measuring the overflow of noradrenaline in the mouse isolated stimulated vas deferens
- 466P FOSBRAEY, P. & JOHNSON, E.S. Presynaptic inhibition of acetylcholine release from cholinergic neurones in the myenteric plexus of the guinea-pig ileum
- 467P ALABASTER, V.A. & HAWKESWOOD, E.  $\text{PGI}_2$  release from guinea-pig lungs: detection and bioassay
- 468P CAVERO, I., GOMENI, R., LEFÈURE, F. & ROACH, A.G. Time-course analysis of the cardiovascular effects of clonidine resulting from the activation of cardiac pre- and vascular postsynaptic  $\alpha$ -adrenoceptors in the pithed rat
- 468P CAVERO, I. & ROACH, A.G. The effects of prazosin on the clonidine induced hypotension and bradycardia in rats and sedation in chicks
- 469P KRUK, Z.L. & SMITH, L.A. A simple and cheap vacuum filtration
- 470P NEDERGAARD, O.A. & SCHROLD, J. Effect of atropine on prejunctional muscarinic and  $\alpha$ -adrenoceptors on postganglionic sympathetic neurones in an isolated blood vessel
- 471P JOHANSEN, T. (introduced by GARLAND, L.G.) Mechanism of A23187-induced histamine release
- 472P ANNING, ELIZABETH N., O'DONNELL, STELLA R. & WANSTALL, JANET C. Extraneuronal accumulation of isoprenaline in guinea-pig trachea, atria and uterus: a histochemical and pharmacological study