# British Journal of Pharmacology

# **CONTENTS**

#### **VOLUME 75 NUMBER 1 JANUARY 1982**

2 VANE, J.R. J.H. Burn: an appreciation

#### SHORT COMMUNICATION

9 POTTER, ERICA K. Angiotensin inhibits action of vagus nerve at the heart

#### **PAPERS**

- 13 HAMILTON, T.C. & LONGMAN, SUSAN D. A comparison of the cardiovascular and sedative actions of the α-adrenoceptor agonists, FLA-136 and clonidine, in the rat
- 23 BISCOE, T.J. & FRY, J.P. Some pharmacological studies on the spastic mouse
- 37 JALILIAN-TEHRANI, MOHAMMAD H., KARAKIULAKIS, GEORGE, LE BLOND, CHRISTINE B., POWELL, RUTH & THOMAS, PATRICK J. Androgen-induced sexual dimorphism in high affinity dopamine binding in the brain transcends the hypothalamic-limbic region
- 49 ADEAGBO, A.S.O. & OKPAKO, D.T. Restoration of vasoconstrictor responses to noradrenaline by prostaglandin E<sub>2</sub> after α-adrenoceptor blockade in rat isolated mesenteric artery
- 57 RAND, M.J., STORY, D.F. & WONG-DUSTING, H.K. Effects of histamine on the resting and stimulation-induced release of [<sup>3</sup>H]-noradrenaline in guinea-pig isolated atria
- 65 EVANS, R.H., FRANCIS, A.A., JONES, A.W., SMITH, D.A.S. & WATKINS, J.C. The effects of a series of ω-phosphonic α-carboxylic amino acids on electrically evoked and excitant amino acid-induced responses in isolated spinal cord preparations
- 77 COLQUHOUN, D. & SHERIDAN, R.E. The effect of tubocurarine competition on the kinetics of agonist action on the nicotinic receptor
- 87 KUROKAWA, HIROSHI & SAKAMOTO, KIMIKO Effects of aspirin, prednisolone and indomethacin on nephrotoxic serum nephritis in the rat
- 93 PERKINS, M.N. & STONE, T.W. Comparison of the effects of ethylenediamine analogues and γaminobutyric acid on cortical and pallidal neurones

- 101 BROWN, C., BURNSTOCK, G., CUSACK, N.J., MEGHJI, P. & MOODY, C.J. Evidence for stereospecificity of the P<sub>1</sub>-purinoceptor
- MILLAR, J.S. & VAUGHAN WILLIAMS, E.M. Differential actions on rabbit nodal, atrial, Purkinje cell and ventricular potentials of melperone, a bradycardic agent delaying repolarization: effects of hypoxia
- 123 DAMEN, FRANK J.M. & MIER, P.D. Cytochrome P-450-dependent O-dealkylase activity in mammalian skin
- 129 MITCHELL, H.W. The effect of inhibitors of arachidonic acid metabolism on drug-induced contractions in isolated tracheal smooth muscle of the pig
- 137 McGIFF, JOHN C., SPOKAS, ERIC G. & WONG, PATRICK Y-K. Stimulation of renin release by 6-oxoprostaglandin E<sub>1</sub> and prostacyclin
- 145 DHAWAN, B.N., SHUKLA, R. & SRIMAL, R.C. Analysis of histamine receptors in the central thermoregulatory mechanism of *Mastomys natalensis*
- 151 RANG, H.P. With an appendix by D. COLQUHOUN & H.P. RANG. The action of ganglionic blocking drugs on the synaptic responses of rat submandibular ganglion cells
- 169 CARTER, R.J. & SHUSTER, S. The association between the melanocyte-stimulating hormone receptor and the  $\alpha_2$ -adrenoceptor on the *Anolis* melanophore
- 177 ANWAR, N. & MASON, D.F.J. Two actions of γaminobutyric acid on the responses of the isolated basilar artery from the rabbit
- 183 ELLORY, J.C. & STEWART, G.W. The human erythrocyte Cl-dependent Na-K cotransport system as a possible model for studying the action of loop diuretics
- 189 GILLESPIE, J.S., HUNTER, J.C. & McKNIGHT, A.T. The effect of ethanol on inhibitory and motor responses in the rat and rabbit anococcygeus and the bovine retractor penis muscles
- 199 GINTZLER, ALAN R. & SCALISI, JENNIE A. Effects of opioids on noncholinergic excitatory responses of the guinea-pig isolated ileum: inhibition of release of enteric substance P
- 207 CARPENTIER, ROBERT G. Effects of harmala alkaloids on transmembrane potentials of guinea-pig papillary muscles

- 213 ATLAS, DAPHNE, FRIEDMAN, ZEEV, LITVIN, YAIR, STEER, MICHAEL L. Synthesis of new haloperidol analogues and characterization of their interactions with α-adrenoceptors in rat parotid slices and human platelet membranes
- 219 KENDALL, T.J.G. & MINCHIN, M.C.W. The effects of anaesthetics on the uptake and release of amino acid neurotransmitters in thalamic slices
- GODFRAIND, T. & MILLER, R.C. Actions of prostaglandin  $F_{2\alpha}$  and noradrenaline on calcium exchange and contraction in rat mesenteric arteries and their sensitivity to calcium entry blockers
- 237 COSTA, J.L., KIRK, K.L. & STARK, H. Uptake of 6-fluoro-5-hydroxytryptamine and 4,6-difluoro-5hydroxytryptamine into releasable and non-releasable compartments of human platelets
- 243 CHIAVARELLI, M., MONCADA, S. & MUL-LANE, K.M. Prostacyclin can either increase or decrease heart rate depending on the basal state
- 251 BLOOM, FLOYD, LAD, PUSHKARAJ, PITT-MAN, QUENTIN & ROGERS, JOSEPH. Blood alcohol levels in rats: non-uniform yields from intraperitoneal doses based on body weight

#### **VOLUME 75 NUMBER 2 FEBRUARY 1982**

#### SHORT COMMUNICATION

257 CUSACK, N.J. & HOURANI, S.M.O. Differential inhibition by adenosine or by prostaglandin E<sub>1</sub> of human platelet aggregation induced by adenosine 5'-O-(1-thiodiphosphate) and adenosine 5'-O-(2-thiodiphosphate)

# **PAPERS**

- 261 GINTZLER, ALAN R., ZUKIN, R. SUZANNE & ZUKIN, STEPHEN R. Effects of phencyclidine and its derivatives on enteric neurones
- 269 BELO, SUSAN E. & TALESNIK, JAIME Coronary vasoconstrictor and vasodilator actions of arachidonic acid in the isolated perfused heart of the rat
- 287 SAMPSON, SANFORD R. & WEISS-ROTEM, CARMELA Relaxant effects of lithium on guinea-pig tracheal smooth muscle in vitro
- 293 BEAUGHARD, M., FERRIER, M., LABRID, C., LAMAR, J.C., LEBOEUF, J. & PIRIS, P. Studies on the bradycardia induced by bepridil
- 301 CALZADO, M.C., GARCIA-CASTELLANO, J.M., MANZANARES, R.M., MARTINEZ, F., PRIETO, B. & TORRES, A. Effects of cimetidine on haematopoiesis in vitro
- 305 PORQUET, MARIE-FRANCE, POURRIAS, BER-NARD & SANTAMARIA, RAPHAEL Effects of 5hydroxytryptamine on canine isolated coronary arteries
- 311 CREMA, A., D'ANGELO, L., FRIGO, G.M., LEC-CHINI, S., ONORI, L. & TONINI, M. Effects of desensitization to adenosine 5'-triphosphate and adenosine on non-adrenergic inhibitory responses in the circular muscle of rabbit colon
- 319 KANE, KATHLEEN, McDONALD, FIONA, PAR-RATT, JAMES, TIMMER, CEES & VINK, JAN Antiarrhythmic effects of Org 6001 in rats: correlation with plasma and tissue drug concentrations
- 325 BUNCE, K.T., McCARTHY, J.J., SPRAGGS, C.F. & STABLES, R. Relationship between lesion formation and permeability of rat gastric mucosa to H<sup>+</sup> and other cations

- 333 GRIFFIN, M.M. & STEVEN, F.S. Inhibition of trypsin and papain by sodium aurothiomalate mediated by exchange reactions
- 341 GATER, P.R., JORDAN, C.C. & OWEN, D.G. Relative activities of substance P-related peptides in the guinea-pig ileum and rat parotid gland, in vitro
- 353 JUDGE, SUSAN E. & NORMAN, J. The action of general anaesthetics on acetylcholine-induced inhibition in the central nervous system of *Helix*
- 359 de BELLEROCHE, J.S. & GARDINER, I.M. Cholinergic action in the nucleus accumbens: modulation of dopamine and acetylcholine release
- 367 BOWEN, D.M. & MAREK, K.L. Evidence for the pharmacological similarity between the central presynaptic muscarinic autoreceptor and postsynaptic muscarinic receptors
  - 373 ADOLFS, MARTIN J.P. & BONTA, IVAN L. Low concentrations of prostaglandin E<sub>2</sub> inhibit the prostacyclin-induced elevation of cyclic adenosine 3',5'-monophosphate in elicited populations of rat peritoneal macrophages
- macrophages

  377 OHIZUMI, YASUSHI, TAKAHASHI, MASAMI & TOBE, AKIHIRO Selective potentiation of noradrenaline in the guinea-pig vas deferens by 2-(4-methylaminobutoxy) diphenylmethane hydrochloride

(MCI-2016), a new psychotropic drug

- 383 CUNNINGHAM, F.M. & SMITH, M.J.H. Leukotriene B<sub>4</sub>: biological activities and the cytoskeleton
- 389 CHAPMAN, D.B. & WAY, E. LEONG. Modification of endorphin/enkephalin analgesia and stress-induced analgesia by divalent cations, a cation chelator and an ionophore
- 397 CUSACK, N.J. & HOURANI, S.M.O. Specific but noncompetitive inhibition by 2-alkylthio analogues of adenosine 5'-monophosphate and adenosine 5'-triphosphate of human platelet aggregation induced by adenosine 5'-diphosphate

401 JARROTT, BEVYN, LOUIS, WILLIAM J. & SUM-MERS, ROGER J. [<sup>3</sup>H]-guanfacine: a radioligand that selectively labels high affinity α<sub>2</sub>-adrenoceptor sites in homogenates of rat brain 409 FITTON, A.G. & PERTWEE, R.G. Changes in body temperature and oxygen consumption rate of conscious mice produced by intrahypothalamic and intracerebroventricular injections of Δ<sup>2</sup>-tetrahydrocannabinol

#### VOLUME 75 NUMBER 3 MARCH 1982

#### **PAPERS**

- 417 HAMILTON, C.A., REID, J.L. & ZAMBOULIS, C. The role of presynaptic α-adrenoceptors in the regulation of blood pressure in the conscious rabbit
- 425 HAMON, GILLES & WORCEL, MANUEL Mechanism of action of angiotensin II on excitation-contraction coupling in the rat portal vein
- 433 ITO, YUSHI & TAJIMA, KIKUO Dual effects of catecholamines on pre- and post-junctional membranes in the dog trachea
- 441 LOUIS, W.J., PAPANICOLAOU, JENNY, SUM-MERS, R.J. & VAJDA, F.J.E. Role of central βadrenoceptors in the control of pentylenetetrazolinduced convulsions in rats
- 447 JUORIO, A.V. The effect of γ-hydroxybutyrate on mouse striatal tyramine, dopamine and homovanillic acid
- 451 CARNEY, JOHN M. Effects of caffeine, theophylline and theobromine on scheduled controlled responding in
- 455 FUJIWARA, SHIGERU, ITO, YUSHI, ITOH, TAKEO, KURIYAMA, HIROSI & SUZUKI, HIK-ARU Diltiazem-induced vasodilatation of smooth muscle cells of the canine basilar artery
- 469 MILLAR, J.S. & VAUGHAN WILLIAMS, E.M. Effects on rabbit nodal, atrial, ventricular and Purkinje cell potentials of a new antiarrhythmic drug, cibenzoline, which protects against action potential shortening in hypoxia
- 479 COPELAND, JACK G., LARSON, DOUGLAS F., ROESKE, WILLIAM R., RUSSELL, DIANE H. & WOMBLE, J.R. β<sub>2</sub>-Adrenoceptors regulate induction of myocardial ornithine decarboxylase in mice in vivo
- 485 BADAWY, A.A.-B., EVANS, C.M. & EVANS, M.

Production of tolerance and physical dependence in the rat by simple administration of morphine in drinking water

- 493 GAGE, PETER W. & SAH, PANKAJ Postsynaptic effects of some central stimulants at the neuromuscular junction
- 503 BARLOW, R.B. The ionization of morphine, hydroxyamphetamine and (+)-tubocurarine chloride and a new method for calculating zwitterion constants
- 513 ITOH, TAKEO, KURIYAMA, HIROSI & SUZUKI, HIKARU Effects of chlorpromazine on the electrical and mechanical properties of intact and skinned muscle cells of guinea-pig mesenteric artery
- 525 INVERNIZZI, R., KMIECIAK-KOLADA, K. & SAMANIN, R. Is receptor activation involved in the mechanism by which (+)-fenfluramine and (+)-norfenfluramine deplete 5-hydroxytryptamine in the rat brain?
- 531 BRINK, CHARLES, DOUGLAS, JAMES S. & DUN-CAN, PAMELA G. Changes in the response of guineapig airways in vivo and in vitro to cimetidine and propranolol during development
- 539 BRAZELL, M.P. & MARSDEN, C.A. Differential pulse voltammetry in the anaesthetized rat: identification of ascorbic acid, catechol and indoleamine oxidation peaks in the striatum and frontal cortex
- 549 COATES, JILL, JAHN, U. & WEETMAN, D.F. The existence of a new subtype of α-adrenoceptor on the rat anococcygeus is revealed by Sgd 101/75 and phenoxybenzamine
- 553 ARUNDELL, LEWIS A. & JOHNS, EDWARD J. Effect of converting enzyme inhibition on the renal haemodynamic responses to noradrenaline infusion in the rat

## **VOLUME 75 NUMBER 4 APRIL 1982**

## **PAPERS**

- ASAI, FUMITOSHI, NISHIMURA, MASAKAZU, SATOH, EIKI & URAKAWA, NORIMOTO Mechanism of cadmium-induced contraction in ileal longitudinal muscle of guinea-pig
- 569 MANTEGAZZA, PAOLO, PARENTI, MARCO, TAMMISO, REMIGIO, VITA, PAOLO, ZAMBOTTI, FERNANDA & ZONTA, NERINA Modification of the antinociceptive effect of morphine by centrally administered diazepam and midazolam

- 573 BELLEAU, B., BENFEY, B.G., BENFEY, T.J. & MELCHIORRE, C. Inhibition by the tetramine disulphide, benextramine, of cardiac chronotropic histamine H<sup>2</sup>-receptor-mediated effects
- 579 BOTTING, REGINA, & MORINAN, ALUN Involvement of 5-hydroxytryptamine in the analgesic action of pethidine and morphine in mice
- 587 CUTHBERT, ALAN W. & MARGOLIUS, HARRY S. Kinins stimulate net chloride secretion by the rat colon
- 599 ILLES, P. & NORTH, R.A. Effects of divalent cations and normorphine on spontaneous excitatory junction potentials in the mouse vas deferens
- 605 FRANCONI, FLAVIA, GOITTI, ALBERTO, MANZINI, STEFANO, MARTINI, FLAVIO, STENDARDI, ISABELLA & ZILLETTI, LUCIL-LA The effect of taurine on high potassium- and noradrenaline-induced contraction in rabbit ear artery

- 613 HUTTUNEN, PIRKKO Hypothalamic cathecholamines and tolerance for severe cold in ethanol-treated guinea-pigs
- 617 BELLEAU, B., BENFEY, B.G. & MELCHIORRE, C. Presynaptic effect of clonidine antagonized by the tetramine disulphide, benextramine
- 623 LEWIS, G.P. & WATTS, I.S. Prostaglandin endoperoxides, thromboxane A<sub>2</sub> and adenosine diphosphate in collagen-induced aggregation of rabbit platelets
- 633 CARLSÖÖ, BENGT, DANIELSSON, ÅKE, HEN-RIKSSON, ROGER & IDAHL, LARS-ÅKE Dissociation of β-adrenoceptor-induced effects on amylase secretion and cyclic adenosine 3',5'-monophosphate accumulation
- 639 RICHARDS, C.D. The actions of pentobarbitone, procaine and tetrodotoxin on synaptic transmission in the olfactory cortex of the guinea-pig