British Journal of Pharmacology

VOLUME 119 (2) SEPTEMBER 1996

SPECIAL REPORTS

- D. Tolan, A.-M. Conway, L. Steele, S. Pyne & N.J. Pyne The identification of DL-threo dihydrosphingosine and sphingosine as novel inhibitors of extracellular signal-regulated kinase signalling in airway smooth muscle

 185
- **J. Gras, J. Llenas, J.M. Palacios & D.J. Roberts** The role of ketoconazole in the QTc interval prolonging effects of H_1 -antihistamines in a guinea-pig model of arrhythmogenicity 187
- E.S.L. Faber, J.P. Chambers, R.H. Evans & G. Henderson Depression of glutamatergic transmission by nociceptin in the neonatal rat hemisected spinal cord preparation in vitro 189
- F. Plane & C.J. Garland Influence of contractile agonists on the mechanism of endothelium-dependent relaxation in rat isolated mesenteric artery

 191

PAPERS

- I. Bresink, T.A. Benke, V.J. Collett, A.J. Seal, C.G. Parsons, J.M. Henley & G.L. Collingridge Effects of memantine on recombinant rat NMDA receptors expressed in HEK 293 cells 195
- M. Nakamura, T. Ando, M. Abe, K. Kumagai & Y. Endo Contrast between effects of aminobisphosphonates and non-aminobisphosphonates on collagen-induced arthritis in mice 205
- T. Unno, S. Komori & H. Ohashi Some evidence against the involvement of arachidonic acid in muscarinic suppression of voltage-gated calcium channel current in guinea-pig ileal smooth muscle cells

 213
- C.C. Tenn, J.M. Neu & L.P. Niles PK 11195 blockade of benzodiazepine-induced inhibition of forskolin-stimulated adenylate cyclase activity in the striatum 223
- X.-J. Yu & M.A. Moskowitz Neuropeptide Y Y_2 receptor-mediated attenuation of neurogenic plasma extravasation acting through pertussis toxin-sensitive mechanisms 229
- M.P. Carrasco, M.C. Sanchez-Amate, C. Marco & J.L. Segovia Evidence of differential effects produced by ethanol on specific phospholipid biosynthetic pathways in rat hepatocytes 233
- J. Gutkowska & P.W. Schiller Renal effects of TAPP, a highly selective μ -opioid agonist 239
- S. Komori, M. Iwata, T. Unno & H. Ohashi Modulation of carbachol-induced $[Ca^{2+}]_i$ oscillations by Ca^{2+} influx in single intestinal smooth muscle cells 245

- R.A. Cunha, P. Correia-de-Sá, A.M. Sebastião & J.A. Ribeiro Preferential activation of excitatory adenosine receptors at rat hippocampal and neuromuscular synapses by adenosine formed from released adenine nucleotides 253
- W.W. Lin & Y.T. Lee Pyrimidinoceptor-mediated activation of phospholipase C and phospholipase A_2 in RAW 264.7 macrophages 261
- X.F. Deng, S. Chemtob & D.R. Varma Characterization of α_{1D} -adrenoceptor subtype in rat myocardium, aorta and other tissues 269
- M.R. MacLean, R.A. Clayton, A.G.B. Templeton & I. Morecroft Evidence for 5-HT₁-like receptor-mediated vasoconstriction in human pulmonary artery 277
- A. Szallasi, M. Jonassohn, G. Ács T. Bíró, P. Ács, P.M. Blumberg & O. Sterner The stimulation of capsaicin-sensitive neurones in a vanilloid receptor-mediated fashion by pungent terpenoids possessing an unsaturated 1,4-dialdehyde moiety 283
- P.G. Knott, P.J. Henry, A.S. McWilliam, P.J. Rigby, L.B. Fernandes & R.G Goldie Influence of parainfluenza-1 respiratory tract viral infection on endothelin receptor-effector systems in mouse and rat tracheal smooth muscle

 291
- R. Fernández, R. Sabater, J.A. Sáez, R. Montes, F. Alba & J.M.R. Ferrer Mediation by neurotensin-receptors of effects of neurotensin on self-stimulation of the medial prefrontal cortex 299
- B.R. Tuladhar, B. Costall & R.J. Naylor Pharmacological characterization of the 5-hydroxytryptamine receptor mediating relaxation in the rat isolated ileum 303
- C. Plumpton, C.J. Ferro, W.G. Haynes, D.J. Webb & A.P. Davenport The increase in human plasma immunoreactive endothelium but not big endothelium-1 or its C-terminal fragment induced by systemic administration of the endothelin antagonist TAK-044
- S. Phenna, E. Carpenter, C. Peers, S. Maudsley & J.P. Gent Inhibition of Ca²⁺-sensitive K⁺ currents in NG 108-15 cells by substance P and related tachykinins 315
- **N.D. Holliday & H.M. Cox** The functional investigation of a human adenocarcinoma cell line, stably transfected with the neuropeptide Y Y_1 receptor 321
- E. Glusa & A. Roos Endothelial 5-HT receptors mediate relaxation of porcine pulmonary arteries in response to ergotamine and dihydroergotamine 330



- L.M. Shuba, T. Asai, S. Pelzer & T.F. McDonald Activation of cardiac chloride conductance by the tyrosine kinase inhibitor, genistein 335
- A. Kawabata & T. Hata Attenuation by prolonged nitric oxide synthase inhibition of the enhancement of fibrinolysis caused by environmental stress in the rat

 346
- G. Kolios, D.A.F. Robertson, N.J. Jordan, A. Minty, D. Caput, P. Ferrara & J. Westwick Interluekin-8 production by the human colon epithelial cell line HT-29: modulation by interleukin-13 351
- P. Vigne, P. Pacaud, V. Urbach, E. Feolde, J.P. Breittmayer & C. Frelin The effect of PPADS as an antagonist of inositol (1,4,5)trisphosphate induced intracellular calcium mobilization 360
- F. Tomoda, R.A. Lew, A.I. Smith, A.C. Madden & R.G. Evans Role of bradykinin receptors in the renal effects of inhibition of angiotensin converting enzyme and endopeptidases 24.11 and 24.15 in conscious rabbits 365
- P.S. Widdowson, M. Farnworth, R.B. Moore, D. Dunn & I. Wyatt Evidence for mediation of L-2-chloropropionic acid-induced delayed neuronal cell death by activation of a constitutive nitric oxide synthase

 374
- H. Pickering, S. Sword, S. Vanhoff, R. Jones & D. Sugden Analogues of diverse structure are unable to differentiate native melatonin receptors in the chicken retina, sheep pars tuberalis and *Xenopus* melanophores 379
- A. Ziyyat, B.-L. Zhang & D. Benzoni Interactions between nitric oxide and prostanoids in isolated perfused kidneys of the rat 388
- A.J. Forhead, K. Whybrew, P. Hughes, F. Broughton Pipkin, M. Sutherland & A.L. Fowden Comparison of angiotensin II type 1 receptor blockade and angiotensin-converting enzyme inhibition in pregnant sheep during late gestation 393

- A. Lindén Increased interleukin-8 release by β -adrenoceptor activation in human transformed bronchial epithelial cells 402
- I. Marshall, R.P. Burt, G.M. Green, M.B. Hussain & C.R. Chapple Different subtypes of α_{1A} -adrenoceptor mediating contraction of rat epididymal vas deferens, rat hepatic portal vein and human prostate distinguished by the antagonist RS 17053
- P.D. Marley & K.A. Thomson Inhibition of nicotinic responses of bovine adrenal chromaffin cells by the protein kinase C inhibitor, Ro 31-8220 416
- R.L.C. Handy, H.L. Harb, P. Wallace, Z. Gaffen, K.J. Whitehead & P.K. Moore Inhibition of nitric oxide synthase by 1-(2-trifluoromethylphenyl) imidazole (TRIM) in vitro: antinociceptive and cardiovascular effects 423
- E. Lilley & A. Gibson Antioxidant protection of NO-induced relaxations of the mouse anococcygeus against inhibition by superoxide anions, hydroquinone and carboxy-PTIO 432
- S.-F. Luo, C.-T. Tsai, W.-B. Wu, S.-L. Pan, Y.-J. Tsai & C.-M. Yang Pharmacological and functional characterization of bradykinin receptors in canine cultured tracheal epithelial cells 439
- M.J. Pierce, J.A. Warner, M.R. Munday & P.T. Peachell Regulation of human basophil function by phosphatase inhibitors 446

The British Journal of Pharmacology is published by Stockton Press, a division of Macmillan Press Ltd. It is the official publication of the British Pharmacological Society.

Scope The British Journal of Pharmacology is published twice a month. It welcomes contributions in all fields of experimental pharmacology including neuroscience, biochemical, cellular and molecular pharmacology. The Board of Editors represents a wide range of expertise and ensures that well-presented work is published as promptly as possible, consistent with maintaining the overall quality of the journal.

This journal is covered by Current Contents, Excerpta Medica, BIOSIS, CABS, CINAHL and Index Medicus.

Editorial Manuscripts (plus two copies) and all editorial correspondence should be sent to: The Editorial Office, British Journal of Pharmacology, St George's Hospital Medical School, Cranmer Terrace, London SW17 0RE, UK. Tel: +44 (0)181 767 6765; Fax: +44 (0)181 767 5645.

Advertisements Enquiries concerning advertisements should be addressed to: Michael Rowley, Hasler House, High Street, Great Dunmow, Essex CM6 1AP, UK. Tel: +44 (0)1371 874613; Fax: +44 (0)1371 872273.

Publisher All business correspondence, supplement enquiries and reprint requests should be addressed to British Journal of Pharmacology, Stockton Press, Houndmills, Basingstoke, Hampshire RG21 6XS, UK. Tel: +44 (0)1256 29242; Fax: +44 (0)1256 810526. Publisher: Marija Vukovojac. Production Controller: Nicci Crawley. Supplement Production Controller: Simone Larché

Subscriptions – EU/Rest of World Subscription price per annum (3 volumes, 24 issues) £655, rest of world £735 (Surface mail) £880 (Airmail), or equivalent in any other currency. Orders must be accompanied by remittance. Cheques should be made payable to Macmillan Magazines and sent to: The Subscription Department, Macmillan Press Ltd, Houndmills, Basingstoke, Hampshire RG21 6XS, UK. Where appropriate, subscribers may make payments into UK Post Office Giro Account No. 519 2455. Full details must accompany the payment. Subscribers from EC territories should add sales tax at the local rate.

Subscriptions – USA USA subscribers call toll free 1-800-221-2123 or send check/money order/credit card details to: Stockton Press, 345 Park Avenue South, 10th Floor, New York, NY 10010-1707; Tel: +1 212 689 9200, Fax: +1 212 689 9711. USA annual subscription rates (institutional/corporate): \$1170 (surface) \$1400 (airmail). Individual making personal payment: \$240.

British Journal of Pharmacology (ISSN 0007-1188) is published twice a month by Macmillan Press Ltd, c/o Mercury Airfreight International Ltd, 2323 Randolph Avenue, Avenel, NJ 07001, USA. Subscription price for institutions is \$1170 per annum (surface). 2nd class postage is paid at Rahway NJ. Postmaster: send address corrections to Macmillan Press Ltd, c/o Mercury Airfreight International Ltd, 2323 Randolph Avenue, Avenel NJ 07001.

Reprints of any article in this journal are available from Stockton Press, Houndmills, Basingstoke, Hampshire RG21 6XS, UK. Tel: +44 (0)1256 29242; Fax: +44 (0)1256 810526.

Copyright © 1996 Stockton Press ISSN 0007-1188

All rights of reproduction are reserved in respect of all papers, articles, illustrations, etc., published in this journal in all countries of the world.

All material published in this journal is protected by copyright, which covers exclusive rights to reproduce and distribute the material. No material published in this journal may be reproduced or stored on microfilm or in electronic, optical or magnetic form without the written authorisation of the Publisher.

Authorisation to photocopy items for internal or personal use of specific clients, is granted by Stockton Press for libraries and other users registered with the Copyright Clearance Center (CCC) Transaction Reporting Service, provided that the base fee of \$12.00 per copy is paid directly to CCC, 21 Congress St., Salem, MA 01970, USA. 0007-1188/96 \$12.00 + \$0.00.

Apart from any fair dealing for the purposes of research or private study, or criticism or review, as permitted under the Copyright, Designs and Patent Act 1988, this publication may be reproduced, stored or transmitted, in any form or by any means, only with the prior permission in writing of the publishers, or in the case of reprographic reproduction, in accordance with the terms of licences issued by the Copyright Licensing Agency.