TRENDS:

Pharmacological Sciences

INCLUDING TOXICOLOGICAL SCIENCES

February 2004

Vol. 25, No. 2 pp. 59-112

Editor Katharine Barnes

Assistant Editor Gillian MacKenzie

Editorial Coordinator Patricia Ward

Illustrations The Studio

Publishing Manager O. Claire Moulton

Editorial Enquiries

Trends in Pharmacological Sciences Elsevier, 84 Theobald's Road, London, UK WC1X 8RR tel: +44 20 7611 4400 fax: +44 20 7611 4470

e-mail: tips@elsevier.com

Subscription Enquiries

E-mail: trends.subs@gss.co.uk

Advisory Editorial Board

S.G. Amara, Pittsburgh, PA, USA
H. Betz, Frankfurt, Germany
N.J.M. Birdsall, London, UK
N.G. Bowery, Birmingham, UK
J.N. Crawley, Bethesda, MD, USA
A.C. Cuello, Montréal, Canada
A. Dray, Montréal, Canada
J.R. Fozard, Basel, Switzerland
B.B. Fredholm, Stockholm, Sweden
T.P. Kenakin, Research Triangle Park, NC,

R.W. Kerwin, London, UK B.K. Kobilka, Stanford, CA, USA M. Lazdunski, Valbonne, France G-Q. Liu, Nanjing, China C.A. Maggi, Florence, Italy J. Meldolesi, Milan, Italy M. Mishina, Tokyo, Japan W.H. Moolenaar, Amsterdam, The Netherlands C.P. Page, London, UK R. Ruffolo, Jr, King of Prussia, PA, USA T.K. Sawyer, Cambridge, MA, USA R.J. Summers, Melbourne, Australia T. Tanaka, Tsu, Japan D. Wallach, Rehovot, Israel Z.G. Wang, Beijing, China S.P. Watson, Birmingham, UK

Update

Research Focus

59 Possible involvement of the endocannabinoid system in the actions of three clinically used drugs Christopher J. Fowler

61 The structure of the GRK2-Gβγ complex: intimate association of G-protein signaling modules Tohru Kozasa 64 Isoform-specific knockout of endothelial myosin light chain kinase: closing the gap on inflammatory lung disease John H. Tinsley, Sarah Y. Yuan and Emily Wilson

Opinion

67 β_2 -Adrenoceptor involvement in inflammatory demyelination and axonal degeneration in multiple sclerosis

Jacques De Keyser, Esther Zeinstra, Jop Mostert and Nadine Wilczak

72 Locally delivered plasmin: why should it be superior to plasminogen activators for direct thrombolysis?

Valery V. Novokhatny, Gary J. Jesmok, Kyle A. Landskroner, Victor J. Marder and Thomas P. Zimmerman

Review

76 From 'gills to pills': urotensin-ll as a regulator of mammalian cardiorenal function Stephen A. Douglas, Dashyant Dhanak and Douglas G. Johns

86 Novel strategies for the pharmacological management of type 2 diabetesArash Nourparvar, Angela Bulotta, Umberto Di Mario and Riccardo Perfetti

92 β -Secretase inhibition for the treatment of Alzheimer's disease – promise and challenge

Martin Citron

98 Epilepsy, CNS viral injury and dynorphin Marylou V. Solbrig and George F. Koob

105 The molecular acrobatics of arrestin activation

Vsevolod V. Gurevich and Eugenia V. Gurevich

Forthcoming articles

Parkinson's disease, pesticides and individual vulnerability M. Paolini, A. Sapone and F.J. Gonzalez

Is ethanol a pro-drug? Role of acetaldehyde in the central effects of ethanol

The heterogeneous course of drug transit through the body A. Dokoumetzidis, V. Karalis, A. Iliadis and P. Macheras

Antidepressant effects of inhibitors of cAMP phosphodiesterase (PDE4) J.M. O'Donnell and H-T. Zhang

Do pediatric drugs cause developing neurons to commit suicide? J.W. Olney, C. Young, V. Jevtovic-Todorovic and C. Ikonomidou

Immunomodulatory and neuroprotective effects of inosine

G. Haskó, M.V. Sitkovsky and C. Szabó

Cover: In this issue, Douglas and colleagues review recent developments in the pharmacology of urotensin-II, first characterized in the marine goby fish, and discuss its role in the mammalian cardiorenal system. Antagonists of urotensin-II are currently under development as novel therapeutic agents for the clinical management of hypertension, heart failure, renal failure and diabetes in humans. The cover image was kindly provided by Kevin Kelley and Kim Anthony. Cover design by Kate Jones.

Available online at www.sciencedirect.com



