

Editorial Board

Chair

P. R. Shepherd • Auckland

Vice Chair, The Americas

G. Salvesen • La Jolla, CA

Vice Chair, Asia-Pacific

T. Xu • Beijing

Vice Chair, Europe

D. R. Alessi • Dundee

Vice Chair Reviews

A. Toker • Boston, MA

Deputy Chairs

M. Blatt • Glasgow**J. F. Cáceres** • Edinburgh**D. Carling** • London**L. J. Goodyear** • Boston, MA**D. Hoekstra** • Groningen**S. Huber** • Urbana, IL**J. E. Ladbury** • Houston, TX**M. A. Lemmon** • Philadelphia, PA**C. MacKintosh** • Dundee**M. Murphy** • Cambridge**S. Roberts** • Buffalo, NY**M. A. Schwartz** • New Haven, CT**D. Tosh** • Bath**D. M. F. van Aalten** • Dundee**B. Vanhaesebroeck** • London**H. M. Wallace** • Aberdeen**M. F. White** • St Andrews

Publisher

P. J. Starley

Executive Editor

M. R. Thorne

Head of Production

M. D. Cunningham

Staff Editors

M. Banerjee**C. L. Curtis****E. A. G. Elloway****J. W. Mockridge****H. F. Roberts**

Editorial Assistant

P. D. Taylor

Administrative Editor, US Office

S. Schendel

Administrative Editor, China Office

L. Huo

S. M. Assmann (University Park, PA)

T. K. Attwood (Manchester)

J. M. Backer (Bronx, NY)

B. M. Baker (Notre Dame, IN)

J. E. Bear (Chapel Hill, NC)

J. L. Blank (Cambridge, MA)

M. A. Bogoyevitch (Melbourne)

L. H. Boise (Atlanta, GA)

J. Bolaños (Salamanca)

S. Bröer (Canberra)

P. S. Brookes (Rochester, NY)

N. J. Buckley (London)

D. Burger (Geneva)

M. Cascante (Barcelona)

R. A. Casero, Jr (Baltimore, MD)

Y.-G. Chen (Beijing)

L. Chernomordik (Bethesda, MD)

A. C. Clark (Raleigh, NC)

V. Darley-Usmar (Birmingham, AL)

M. J. Davies (Sydney)

B. Davis (Oxford)

L. A. Devi (New York, NY)

I. Dikic (Frankfurt)

R. Docampo (Athens, GA)

D. Doyle (Dublin)

C. S. Duckett (Ann Arbor, MI)

A. F. Dulhunty (Canberra)

S. Flitsch (Manchester)

P. G. W. Gettins (Chicago, IL)

B. Halliwell (Singapore)

J. A. Hardy (Amherst, MA)

J. M. Horowitz (Raleigh, NC)

E. Ikonen (Helsinki)

A. Imberty (Grenoble)

D. A. Jans (Monash)

P. A. Jeggo (Brighton)

D. Jordan (Peoria, IL)

M. G. Kazanietz (Philadelphia, PA)

Z. Knight (New York, NY)

D. Komander (Cambridge)

D. W. Laird (London, ON)

K. Lingelbach (Marburg)

D. W. Litchfield (London, ON)

B. Luisi (Cambridge)

B. D. Manning (Boston, MA)

M. McManus (Palmerston North)

G. Melino (Leicester)

J. Miernyk (Columbia, MO)

E. T. Morgan (Atlanta, GA)

M. Muckenthaler (Heidelberg)

B. Mulloy (South Mimms)

A. W. Munro (Manchester)

G. Murphy (Cambridge)

H. Y. Naim (Hannover)

J. H. Naismith (St Andrews)

A. R. Nebreda (Barcelona)

W. Ogawa (Kobe)

M. Okada (Osaka)

G. Panayotou (Varese)

D. Pei (Columbus, OH)

N. D. Perkins (Newcastle)

P. F. Pilch (Boston, MA)

W. C. Plaxton (Kingston, ON)

S. Ponnambalam (Leeds)

R. Y. Poon (Hong Kong)

B. V. L. Potter (Bath)

Z. Radić (La Jolla, CA)

K. Rittinger (London)

M. F. Roberts (Boston, MA)

J. M. Sanchez-Ruiz (Granada)

R. Sasisekharan (Cambridge, MA)

N. Savery (Bristol)

J. R. Sayers (Sheffield)

K. Schumacher (Heidelberg)

P. T. Schumacker (Chicago, IL)

F. J. Sharom (Guelph, ON)

R. J. Shaw (La Jolla, CA)

G. S. Shelness (Winston-Salem, NC)

H. Shimano (Tsukuba City)

J. Slack (Minneapolis, MN)

S. Spiegel (Richmond, VA)

W. M. Stark (Glasgow)

H. Stenmark (Oslo)

C. Tickle (Bath)

N. K. Tonks (Gold Spring Harbor, NY)

C. Tournier (Manchester)

C. Troy (New York, NY)

H. D. Ulrich (South Mimms)

A. J. Vidal-Puig (Cambridge)

H. J. Vogel (Calgary, AB)

S. P. Watson (Birmingham)

S. Whitney (Canberra)

C. Winterbourn (Christchurch, NZ)

D. Withers (London)

D. Wu (Guangzhou)

A. Xu (Hong Kong)

H.-W. Xue (Shanghai)

I. Zachary (London)

C. Zurzolo (Paris)

- Journal compilation © 2012 Biochemical Society
- The *Biochemical Journal* (ISSN 0264-6021 for print/online journal; ISSN 1470-8728 for online only journal) is published and distributed by Portland Press Limited on behalf of the Biochemical Society (the owner), and appears twice monthly (24 issues).
- **Editorial and publishing offices:** *Biochemical Journal*, Portland Press Limited, Third Floor, Charles Darwin House, 12 Roger Street, London WC1N 2JU, U.K.
- **US agent:** c/o Mercury International, 365 Blair Road, Avenel, NJ 07001, U.S.A.
- **Subscriptions department:** Portland Customer Services, P.O. Box 32, Commerce Way, Colchester CO2 8HP, U.K.
- All rights reserved. Apart from any fair dealing for the purposes of research or private study, or criticism or review, as permitted under the Copyright, Designs and Patents Act, 1988, this publication may be reproduced, stored or transmitted, in any forms 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 permissions granted by copyright clearing houses such as the Copyright Licensing Agency (U.K.) or the Copyright Clearance Center (U.S.A.). The CCC item-fee code for this publication is 0264-6021/2012/\$50.00 + 0.00. Inquiries concerning reproduction outside those terms should be sent to the publishers at the above-mentioned address.
- Although, at the time of going to press, the information contained in this publication is believed to be correct, neither the authors nor the editors nor the publisher assume any responsibility for any errors or omissions herein contained. Opinions expressed in articles are not necessarily those of the editors, the publisher or the owner.
- Periodicals postage paid at Rahway, NJ, U.S.A.
- **Postmaster:** send address corrections to *Biochemical Journal*, c/o Mercury International, 365 Blair Road, Avenel, NJ 07001, U.S.A.
- **Cover design:** Angie Moyes (www.fuz.co.uk).
- **Cover image credits:** M. Sharon Stack, University of Missouri; Carmen A. Mannella, Research and Technology Wadsworth Center, Albany, NY; Nottingham *Arabidopsis* Stock Centre (NASC); G. P. Côté, Kingston, Ont.; G. Salvesen, La Jolla; Dr Gordon Beahes, Newcastle University.



● **General policy** The *Biochemical Journal* publishes papers in English in all fields of biochemistry and cellular and molecular biology, provided that they make a sufficient contribution to knowledge in these fields. Papers may include new results obtained experimentally, descriptions of new experimental methods of biochemical importance, or new interpretations of existing results. Novel theoretical contributions will be considered, although these papers should also contain some experimental testing of the theory. All work presented should have as its aim the development of biochemical concepts rather than the mere recording of facts. Preliminary, confirmatory or inconclusive work will not be published. The *Biochemical Journal* will not publish material that has been wholly or largely published elsewhere, even as a preliminary communication or in unrefereed symposium proceedings or on the World Wide Web (WWW); equally, fragmentation of research into the 'least publishable unit' is discouraged.

Submission of a paper implies that it has been approved by all the named authors, that all persons entitled to authorship have been so named, that it reports unpublished work that is not under consideration elsewhere, and that if the paper is accepted for publication the authors will transfer to the Biochemical Society the copyright in the paper, which will then not be published elsewhere in the same form, in any language, without the consent of the Society. Authors will be required to sign an undertaking to these effects.

Authors may suggest potential reviewers for their papers, but the journal is under no obligation to follow such suggestions. Authors may also specify the names of those they wish to be excluded from the review process, and such wishes are usually respected unless, in the opinion of the journal, such a request unreasonably excludes all the expertise available to it in that scientific area.

To allow the reviewers to assess possible overlap with previous work, all submitted papers must be accompanied by duplicate copies of the author's relevant published work, including that on the WWW, and of all related papers in press or under editorial consideration in this or other journals.

The following types of paper are included in the journal.

Research Papers are the normal form of publication, and may be of any length that is justified by their content. However, because of pressure for space in the journal, no paper, whatever its scientific merits, will be accepted if it exceeds the minimum length required for precision in describing the experiments and clarity in interpreting them. As a guide, most Research Papers published in the *Biochemical Journal* are of between six and eight

printed pages. A concise well-written paper tends to be published more rapidly.

Accelerated Publications (APs) are short (normally four printed pages) papers bringing particularly novel and significant findings to the attention of the research community. It is intended that a decision on acceptance or rejection will be made within 10 working days of receipt, and publication of accepted APs in an issue will follow within 2 months. APs receive full but accelerated reviewing. The criteria of 'novelty and significance' are strictly enforced, and papers may be rejected solely on the grounds of lack of novelty and significance. APs are not a path to accelerated publication of sound but non-urgent material. Authors must include in their letter of submission a brief statement of why they believe their AP merits accelerated treatment. Colour figures will be published free of charge in APs, provided the use of colour is deemed scientifically necessary by the reviewers.

Reviews will usually be solicited, although unsolicited reviews will be considered for publication. Prospective writers of reviews should first consult the Reviews Editor, via the editorial office, and should enclose a short (one page) summary of the area they propose to cover.

● **Procedure for submission** These instructions do not replace the official *Biochemical Journal* Instructions to Authors (<http://www.BiochemJ.org>). Authors are encouraged to refer to these for overall guidelines on submitting a paper. Before preparing papers for the journal, authors should consult a current issue to make themselves familiar with the general format, such as the use of cross-headings, layout of tables and figures and citation of references. A full page of text in the *Biochemical Journal* contains approximately 1200 words; when calculating the printed length of papers, allowance must be made for the space occupied by tables and figures and the number of text words reduced accordingly.

The numerical system of references must be used. A reference to 'unpublished work' must be accompanied by the names of all persons concerned: a reference to a 'personal communication' must be supported by written permission for the quotation from the person or persons concerned; both of these types of citation are permitted in the text only, not in the list of references.

● **Submit manuscripts online** Authors should submit manuscripts electronically using the Online Submission and Review System available at <http://www.BiochemJ.org/submit/>

● **Immediate Publications** Manuscripts are published online in PDF format as soon as they are accepted, unless on submission the author requests that this not be done. Immediate Publications are listed in and accessible through Medline, and are freely available to anyone with Internet access.

● **Opt2Pay** Choose to make your paper freely available. For more information see www.biochemJ.org.

● **Queries and correspondence** Authors in the Americas should address all queries and correspondence about their submission to: Dr Sharon Schendel, BJ USA, The Sanford-Burnham Institute for Medical Research, 10901 N. Torrey Pines Road, La Jolla, CA 92037, U.S.A. (telephone +1 858 795 5283; fax +1 858 795 5284; email editorial@biochemjusa.org). Authors in China should contact: Dr Lin Huo, Institute of Biophysics, Chinese Academy of Sciences, Room 5202, 15 Datun Road, Chaoyang District, Beijing 100101 (telephone +86 10 64888573; email editorial@biochemj.cn). Authors in the U.K., the rest of Europe, Japan and the rest of the world should contact: The Publisher, *Biochemical Journal*, Portland Press Limited, Third Floor, Charles Darwin House, 12 Roger Street, London WC1N 2JL, U.K. (telephone +44 20 7685 2410; fax +44 20 7685 2469; email editorial@portlandpress.com).

● **Colour figures** Colour figures are published free of charge provided that the corresponding author on the published paper has been a Full or Early Career member of the Biochemical Society for at least 2 years and that the use of colour is deemed scientifically necessary by the reviewers. Otherwise the charges are £550 for the first colour figure and £300 for each subsequent colour figure.

● **Multimedia adjuncts** The Biochemical Journal Online offers authors the opportunity to enhance their papers with multimedia adjuncts (e.g. time-lapse movies, three-dimensional structures, animated schemes). These will be submitted to peer review alongside the manuscript. To submit a paper with a multimedia adjunct, please attach the file when you submit your manuscript electronically. Preferred formats are QuickTime for time-lapse movies, PDB for structures and Flash for animated schemes. There is no extra charge associated with the publication of a multimedia adjunct online.

● **COPE** The *Biochemical Journal* is a member of the Committee on Publication Ethics and endorses its guidelines, which are available at <http://publicationethics.org.uk>

Other information

The *Biochemical Journal* is published and distributed by Portland Press Limited on behalf of the Biochemical Society. It is published twice monthly; in 2012 volumes 441–448 (three parts each) will appear. The subscription also includes an author and key-word index.

● **Abstracted by/indexed in:** BIOBASE, BIOSIS, CAB International, Chemical Abstracts Service, Current Contents, EMBASE, International Food Information Service, Medline/Index Medicus, Proquest Information & Learning, Science Citation Index.

● **Subscription rates** Institutional subscription rates for 2012 are shown below. Subscribers to the *Biochemical Journal* can subscribe additionally to *Biochemical Society Transactions* on a joint subscription at a reduced rate (see www.portlandpress.com for further details). Terms are cash with order (US\$ in N. America, £ sterling for rest of the world, or US\$ equivalent at current rate of exchange; subscribers in the EU may

pay in £ sterling or Euros), or against pro forma invoice. Orders should be sent to the address shown, to your usual agent or purchased online at www.portlandpress.com.

	N. America	Rest of world	Euro price
One year (8 vols)	US\$4529	£2530	€3830
Print and online	US\$4076	£2278	€3446
Online only	US\$256	£130	€220
Single issues (print only)			

Overseas rates include airfreight delivery. Airtpeeded delivery is available at an additional cost of £92.85/\$142/€115.

Value Added Tax (VAT) on online-only and 'combined' subscriptions is due on supplies to subscribers within the UK, and to non-registered subscribers elsewhere in the EU. If in the EU please state your VAT number otherwise VAT may be charged at the appropriate national rate.

● **Electronic back archive** This is freely available to all users with Internet access.

● **Microfiche and back issues** Volumes 102–408 of the *Biochemical Journal* are available on microfiche. Back issues are also available. Further details may be obtained from the address below.

● Subscription Department

Portland Customer Services
P.O. Box 32, Commerce Way
Colchester CO2 8HP, Essex, U.K.
(telephone 01206 796351; fax 01206 799331;
email sales@portland-services.com).

● **Advertising** Enquiries about advertising should be addressed to marketing@portlandpress.com.

● The paper and cover-boards used in this journal are sourced from sustainable, managed and renewed commercial forests, and are fully recyclable. The bleaching process used for the pulp is 100% ECF (elemental chlorine free).

Reviews

Plant cell walls to ethanol

Published on the Internet 13 February 2012,
doi:10.1042/BJ20111922

D.B. Jordan, M.J. Bowman, J.D. Braker,
B.S. Dien, R.E. Hector, C.C. Lee, J.A. Mertens
and K. Wagschal

241–252

Role and function of macrophages in the metabolic syndrome

Published on the Internet 13 February 2012,
doi:10.1042/BJ20111708

P. Bhargava and C.-H. Lee

253–262

Research Papers

Targeting of pro-apoptotic TLR adaptor SARM to mitochondria: definition of the critical region and residues in the signal sequence

Published as BJ Immediate Publication 7 December 2011,
doi:10.1042/BJ20111653

P. Panneerselvam, L.P. Singh, B. Ho, J. Chen
and J.L. Ding



263–271

Epidermal growth factor induces tumour marker AKR1B10 expression through activator protein-1 signalling in hepatocellular carcinoma cells

Published as BJ Immediate Publication 2 December 2011,
doi:10.1042/BJ20111322

Z. Liu, R. Yan, A. Al-Salman, Y. Shen, Y. Bu, J. Ma,
D.-X. Luo, C. Huang, Y. Jiang, A. Wilber, Y.-Y. Mo,
M.C. Huang, Y. Zhao and D. Cao

273–282

The crystal structure of human UDP-glucose pyrophosphorylase reveals a latch effect that influences enzymatic activity

Published as BJ Immediate Publication 1 December 2011,
doi:10.1042/BJ20111598

Q. Yu and X. Zheng



283–291

Mesothelin enhances invasion of ovarian cancer by inducing MMP-7 through MAPK/ERK and JNK pathways

Published as BJ Immediate Publication 14 October 2011,
doi:10.1042/BJ20110282

M.-C. Chang, C.-A. Chen, P.-J. Chen, Y.-C. Chiang,
Y.-L. Chen, T.-L. Mao, H.-W. Lin, W.-H. Lin Chiang
and W.-F. Cheng



293–302

ALAS1 gene expression is down-regulated by Akt-mediated phosphorylation and nuclear exclusion of FOXO1 by vanadate in diabetic mice

Published as BJ Immediate Publication 10 November 2011,
doi:10.1042/BJ20111005

L.M. Oliveri, C. Davio, A.M.d.C. Battle and E.N. Gerez

303–310

Up-regulated miR-17 promotes cell proliferation, tumour growth and cell cycle progression by targeting the RND3 tumour suppressor gene in colorectal carcinoma

Published as BJ Immediate Publication 1 December 2011,
doi:10.1042/BJ20111517

H. Luo, J. Zou, Z. Dong, Q. Zeng, D. Wu and L. Liu



311–321

An aspartate residue in the external vestibule of GLYT2 (glycine transporter 2) controls cation access and transport coupling

Published as BJ Immediate Publication 1 December 2011,
doi:10.1042/BJ20110247

G. Pérez-Siles, E. Núñez, A. Morreale, E. Jiménez,
A. Leo-Macías, G. Pita, F. Cherubino, R. Sangaletti,
E. Bossi, Á.R. Ortiz, C. Aragón and B. López-Corcuera



323–334

Lactococcus lactis HemW (HemN) is a haem-binding protein with a putative role in haem trafficking

Published as BJ Immediate Publication 5 December 2011,
doi:10.1042/BJ20111618

H.K. Abicht, J. Martinez, G. Layer, D. Jahn and M. Solioz



335–343

Progestins activate 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3 (PFKFB3) in breast cancer cells

Published as BJ Immediate Publication 24 November 2011,
doi:10.1042/BJ20111418

L. Novellasdemunt, M. Obach, L. Millán-Ariño,
A. Manzano, F. Ventura, J.L. Rosa, A. Jordan,
À. Navarro-Sabate and R. Bartrons

345–356

Contents

- Functional mapping of the disparate activities of the yeast moonlighting protein Hal3
Published as BJ Immediate Publication 29 November 2011, doi:10.1042/BJ20111466
- Hydroperoxide and peroxynitrite reductase activity of poplar thioredoxin-dependent glutathione peroxidase 5: kinetics, catalytic mechanism and oxidative inactivation
Published as BJ Immediate Publication 29 November 2011, doi:10.1042/BJ20111378
- Membrane integration of a mitochondrial signal-anchored protein does not require additional proteinaceous factors
Published as BJ Immediate Publication 5 December 2011, doi:10.1042/BJ20111363
- Inactivation of ceramide transfer protein during pro-apoptotic stress by Golgi disassembly and caspase cleavage
Published as BJ Immediate Publication 1 December 2011, doi:10.1042/BJ20111461
- Inhibition of glutaminyl cyclase attenuates cell migration modulated by monocyte chemoattractant proteins
Published as BJ Immediate Publication 8 November 2011, doi:10.1042/BJ20110535
- MOCA is an integrator of the neuronal death signals that are activated by familial Alzheimer's disease-related mutants of amyloid β precursor protein and presenilins
Published as BJ Immediate Publication 24 November 2011, doi:10.1042/BJ20100993
- Oxidation of Met¹⁶⁰⁶ in von Willebrand factor is a risk factor for thrombotic and septic complications in chronic renal failure
Published as BJ Immediate Publication 18 November 2011, doi:10.1042/BJ20111798
- Secreted CXCL12 (SDF-1) forms dimers under physiological conditions
Published as BJ Immediate Publication 6 December 2011, doi:10.1042/BJ20111341
- Interfacial water molecules in SH3 interactions: a revised paradigm for polyproline recognition
Published as BJ Immediate Publication 24 November 2011, doi:10.1042/BJ20111089
- J.A. Abrie, A. González, E. Strauss and J. Ariño
- B. Selles, M. Hugo, M. Trujillo, V. Srivastava, G. Wingsle, J.-P. Jacquot, R. Radi and N. Rouhier
- E. Merklinger, Y. Gofman, A. Kedrov, A.J.M. Driessen, N. Ben-Tal, Y. Shai and D. Rapaport
- S. Chandran and C.E. Machamer
- Y.-L. Chen, K.-F. Huang, W.-C. Kuo, Y.-C. Lo, Y.-M. Lee and A.H.-J. Wang
- N. Tachi, Y. Hashimoto and M. Matsuoka
- V. De Filippis, S. Lancellotti, F. Maset, B. Spolaore, N. Pozzi, G. Gambaro, L. Oggianu, L.A. Calò and R. De Cristofaro
- P. Ray, S.A. Lewin, L.A. Mihalko, S.-C. Leshner-Perez, S. Takayama, K.E. Luker and G.D. Luker
- J.M. Martin-Garcia, J. Ruiz-Sanz and I. Luque
-  **357–368**
-  **369–380**
-  **381–389**
-  **391–401**
-  **403–412**
-  **413–422**
-  **423–432**
-  **433–442**
-  **443–451**

Editorial Advisory Panel

- D. F. Ackerley (Wellington, NZ)
L. Agius (Newcastle upon Tyne)
A. Aitken (Edinburgh)
L. Alhonen (Kuopio)
B. Allen (Montréal, QC)
A. Z. Ansari (Madison, WI)
T. M. Antalis (Baltimore, MD)
A. Aplin (Albany, NY)
S. T. Arold (Houston, TX)
- S. M. Bailey (Birmingham, AL)
A. J. Baines (Canterbury)
M. P. Barrett (Glasgow)
G. J. Barritt (Adelaide)
A. Basak (Ottawa, ON)
I. Behrmann (Luxembourg)
D. Benbrook (Oklahoma City, OK)
A. M. Bennett (New Haven, CT)
R. Beyaert (Ghent)
C. D. Bingle (Sheffield)
L.-M. Birkholtz (Pretoria)
G. E. Blair (Leeds)
T. Boggon (New Haven, CT)
G. B. Bolger (Birmingham, AL)
K. M. Botham (London)
R. P. Bowater (Norwich)
S. Bratton (Austin, TX)
S. Bray (Cambridge)
D. N. Brindley (Edmonton, AB)
A. J. Brown (Sydney)
J. Brown (Newcastle upon Tyne)
H. Brumer (Stockholm)
U. T. Brunk (Linköping)
N. Bryant (Glasgow)
N. J. Bulleid (Glasgow)
T. D. Butters (Oxford)
- E. Cahoon (Lincoln, NE)
K. Cain (Leicester)
D. A. Calderwood (New Haven, CT)
V. Calleja (London)
M. Campanella (London)
D. Campopiano (Edinburgh)
L. H. Chamberlain (Glasgow)
K. E. Chapman (Edinburgh)
Y. Chen (Shanghai)
R. Chiesa (Milan)
A. K. Choudhury (Iowa City, IA)
G. C. Churchill (Oxford)
G. J. Clark (Louisville, KY)
P. J. Coffey (Utrecht)
P. Cohen (Dundee)
S. J. Cook (Cambridge)
M. R. Cookson (Bethesda, MD)
C. E. Creutz (Charlottesville, VA)
K. Croft (Perth, West. Aust.)
P. Curnow (Bristol)
- C. Dani (Nice)
R. M. Daniel (Hamilton, NZ)
C. J. Danpure (London)
V. L. Davidson (Orlando, FL)
S. Dawson (Nottingham)
K. A. DeFea (Riverside, CA)
V. De Filippis (Padua)
A. DeLong (Providence, RI)
N. Demaurex (Geneva)
C. H. de Moor (Nottingham)
J.-B. Denault (Sherbrooke, QC)
E. Deuerling (Konstanz)
Q. Deveraux (San Diego, CA)
G. M. Di Guglielmo (London)
M. Dillingham (Bristol)
J. Ding (Shanghai)
A. Dingley (Auckland)
S. Djordjevic (London)
F. E. Domann (Iowa City, IA)
C. P. Downes (Dundee)
R. P. Doyle (Syracuse, NY)
- A. Draeger (Bern)
K. Drickamer (London)
C. D'Souza-Schorey (Notre Dame, IN)
- E. Ellis (Glasgow)
J. A. Ellis (London)
P. M. Epstein (Farmington, CT)
C. Erneux (Brussels)
P. C. Evans (Sheffield)
P. Eysers (Sheffield)
- M. Falasca (London)
J. Fandrey (Essen)
K. M. Ferguson (Philadelphia, PA)
M. C. Field (Cambridge)
B. N. Finck (St Louis, MO)
J. U. Flanagan (Auckland)
F. Foufelle (Paris)
K. R. Fox (Southampton)
M. S. Francis (Umeå)
A. M. Fry (Leicester)
P. Fuentes-Prior (Barcelona)
F. V. Fuller-Pace (Dundee)
- C. G. Gahmberg (Helsinki)
T. Galli (Paris)
J. C. Garcia-Barrón (Murcia)
B. Garner (Wollongong)
K. L. Gaston (Bristol)
K. Gaus (Sydney)
M. Ginger (Lancaster)
A. Gomez-Muñoz (Bilbao)
M. Goppelt-Struebe (Erlangen)
L. M. Graves (Chapel Hill, NC)
P. R. Graves (New York, NY)
J. E. Gray (Sheffield)
N. K. Gray (Edinburgh)
F. Gribble (Cambridge)
G. Grogan (York)
A. H. Guse (Hamburg)
- A. P. Halestrap (Bristol)
A. Hall (New York, NY)
M. B. Hampton (Christchurch, NZ)
W. Han (Singapore)
P. A. Handford (Oxford)
J. Hanley (Bristol)
G. C. Hansson (Gothenburg)
J. L. Harris (San Diego, CA)
R. K. Hartmann (Marburg)
C. L. Hawkins (Newtown, NSW)
P. T. Hawkins (Cambridge)
J. D. Hayes (Dundee)
O. Hazeki (Hiroshima)
R. P. Hellens (Auckland)
B. Henrissat (Marseille)
T. P. Herbert (Leicester)
H. Hiasa (Minneapolis, MN)
K. Hinchliffe (Manchester)
M. Hodgkin (Coventry)
K. Hoebe (Cincinnati, OH)
I. B. Holland (Orsay, France)
G. D. Holman (Bath)
M. J. Holness (London)
J. Horsfield (Dunedin)
M. D. Houslay (Glasgow)
W. E. Hughes (Sydney)
K. M. Humphries (Oklahoma City, OK)
H. S. Hundal (Dundee)
A. N. Hunt (Southampton)
J. Huntington (Cambridge)
W. Hunziker (Singapore)
- C. M. Isacke (London)
B. E. Isakson (Charlottesville, VA)
H. Ischiropoulos (Philadelphia, PA)
P. B. Iynedjian (Geneva)
- E. L. Jacobson (Tucson, AZ)
S. Janecek (Bratislava)
J. Jensen (Oslo)
X. Jiang (New York, NY)
J. Johansson (Stockholm)
L. B. Justement (Birmingham, AL)
- E. Kalkhoven (Utrecht)
H. H. Kampinga (Groningen)
V. L. Katanaev (Lausanne)
G. J. Kemp (Liverpool)
I. D. Kerr (Nottingham)
A. J. Ketterman (Nakhon Pathom)
S. Keyse (Dundee)
M. S. Kimber (Guelph, ON)
M. R. Kini (Singapore)
L. Kjellen (Uppsala)
L. A. Kleczkowski (Umeå)
E. Klipp (Berlin)
E. Knecht (Valencia)
A. Koleske (New Haven, CT)
Z. Kovacevic (Sydney)
O. H. Kramer (Jena)
J. Kwon (Seoul)
- W. Laing (Auckland)
S. Lamande (Melbourne)
D. A. Lane (London)
D. J. R. Lane (Sydney)
J.-Y. Lee (Newark, DE)
S. Lee (Notre Dame, IL)
P. Lefebvre (Lille)
M. Leippe (Kiel)
C. C. Leslie (Denver, CO)
R. Lightowers (Newcastle upon Tyne)
H.-K. Lin (Houston, TX)
C. Lindon (Cambridge)
J. S. Lindsey (Pullman, WA)
K. L. Linton (London)
H. J. Lipps (Witten)
K. List (Detroit, MI)
D. Liu (Beijing)
O. Lockridge (Omaha, NE)
P. S. Lorenzo (Honolulu, HI)
M. Lowe (Manchester)
N. Lowndes (Galway)
A. L. Lucius (Birmingham, AL)
A. Luckhoff (Aachen)
K. A. Lukyanov (Moscow)
M. Lyon (Manchester)
- J. A. MacDonald (Calgary, AB)
D. J. MacEwan (Norwich)
L. Mach (Vienna)
J. Mackrill (Cork)
R. Madhubala (New Delhi)
G. Maga (Pavia)
A. I. Magee (London)
C. C. Malbon (Stony Brook, NY)
J. P. G. Malthouse (Dublin)
G. E. Mann (London)
J. S. Marchant (Minneapolis, MN)
J. Martin (Tübingen)
P. E. Martin (Glasgow)
R. W. Mason (Wilmington, DE)
A. E. Mast (Milwaukee, WI)
A. Matagne (Liège)
S. A. Matthews (Dundee)
M. J. McConville (Melbourne)
I. J. McEwan (Aberdeen)
D. McIntosh (London)
A. G. McLennan (Liverpool)
D. W. Meek (Dundee)
T.-C. Meng (Taipei)
A. R. Merrill (Guelph)
E. Metzner (Essen)
A. J. Michael (Dallas, TX)
M. Migand (Belfast)
- A. H. Millar (Crawley, West. Aus.)
E. M. Mills (Austin, TX)
K.-i. Miyamoto (Tokushima)
G. B. Moorhead (Calgary, AB)
T. F. Moraes (Toronto, ON)
A. Morgan (Liverpool)
S. Morley (Brighton)
H. G. Munshi (Chicago, IL)
S. Murphy (Oxford)
- H. Nagase (London)
K. Nehrke (Rochester, NY)
P. Newsholme (Perth, West. Aust.)
R. Nibbs (Glasgow)
S. Nicholson (Melbourne)
- R. T. O'Keefe (Manchester)
L. A. J. O'Neill (Dublin)
J. M. O'Sullivan (Auckland)
- D. N. Palmer (Canterbury, NZ)
R. Palmer (Umeå)
F. Palmieri (Bari)
K. Pantopoulos (Montréal, QC)
R. B. Parsons (London)
L. J. Partridge (Sheffield)
M. Pastor-Anglada (Barcelona)
S. Patel (London)
B. Payrastré (Toulouse)
M. Peckham (Leeds)
S. Perrett (Beijing)
J. M. Peters (University Park, PA)
W. A. Phillips (Melbourne)
T. S. Pillay (Cape Town)
S. M. Pitson (Adelaide)
T. Polenova (Newark, NJ)
D. Poyner (Birmingham)
C. G. Print (Auckland)
I. A. Prior (Liverpool)
P. Pryor (York)
E. L. G. Pryzdial (Vancouver, BC)
M. Pusch (Genova)
- B. Qualmann (Jena)
- S. Rahman (London)
D. P. Ramji (Cardiff)
E. L. Raven (Leicester)
B. Reaves (Athens, GA)
S. Rebuffat (Paris)
R. J. Reece (Manchester)
G. A. Reid (Edinburgh)
O. Rey (Los Angeles, CA)
I. Richard (Evry)
S. J. Richardson (Bundoora)
C. C. Rider (Egham)
M. H. Rider (Brussels)
D. J. Riese (Auburn, AL)
N. J. Robinson (Newcastle upon Tyne)
S. Rocha (Dundee)
E. M. Rosen (Washington, DC)
J. Rouse (Dundee)
E. Rubinstein (Villejuif)
F. Ruggiero (Lyon)
- J.-M. Sabatier (Marseille)
D. B. Sacks (Bethesda, MD)
P. Saftig (Kiel)
D. Schlaepfer (La Jolla, CA)
M. L. Schmitz (Giessen)
L. Schomburg (Berlin)
N. S. Scrutton (Manchester)
L. C. Serpell (Brighton)

EDITORIAL ADVISORY PANEL (continued)

J. K. Sethi (Cambridge)
B. Sha (Birmingham, AL)
Y. Shai (Rehovot)
L. M. Shantz (Hershey, PA)
S. B. Shears
(Research Triangle Park, NC)
B. Shilton (London, ON)
T. Shimizu (Sendai)
J. Shorter (Philadelphia, PA)
K. Siddle (Cambridge)
L. Sistonen (Turku)
A. G. Smith (Leicester)
T. K. Smith (St Andrews)
M. Soberon (Cuernavaca)
M. Solioz (Bern)
S. Souchelnyskiy (Solna)
J. Spencer (Bristol)
F. Spener (Graz)
R. V. Stahelin (South Bend, IN)
M. J. R. Stark (Dundee)
H. R. Stennicke (Bagsvaerd)
G. S. Stewart (Birmingham)
W. Stöcker (Mainz)
A. Y. Strongin (La Jolla, CA)
D. G. Stupack (La Jolla, CA)

E. J. Sundberg (Baltimore, MD)
C. Sutherland (Dundee)

T. Takenawa (Kobe)
C. T. Taylor (Dublin)
M. E. Taylor (London)
A. Tengholm (Uppsala)
A. Tepikin (Liverpool)
V. Tergaonkar (Singapore)
M. Thelen (Bellinzona)
G. Thiel (Homburg)
G. M. H. Thomas (London)
T. Tiganis (Melbourne)
T. Toda (London)
K. Török (London)
P. Trayhurn (Liverpool)
G. C. Tsokos (Boston, MA)

S. Urbé (Liverpool)

J. van Hellemond (Rotterdam)

E. Van Schaftingen (Brussels)
A. Varadi (Budapest)
N. C. Veitch (Kew)
K. Venkateswarlu (Swansea)
F. Villarroya (Barcelona)
D. Vyoral (Prague)

M. C. Wahl (Göttingen)
D. M. Walsh (Dublin)
M. P. Walsh (Calgary)
F. Wan (Baltimore, MD)
H.-G. Wang (Hershey, PA)
M. J. Warren (Canterbury)
R. H. Wenger (Zürich)
G. Werner-Felmayer (Innsbruck)
I. E. Wertz (South San Francisco, CA)
D. A. White (Birmingham)
J. Whitehead (Brisbane)
I. B. H. Wilson (Wien)
J.-O. Winberg (Tromsø)
S. J. Winder (Sheffield)
S. G. Withers (Vancouver, BC)
R. Wojcikiewicz (Syracuse, NY)
P. Wojtaszek (Poznan)

S. Wolf (Berlin)
J. M. Woof (Dundee)
M. C. Wright
(Newcastle upon Tyne)
S. Wright (Leeds)

F. Xu (Davis, CA)
G. Xu (Shanghai)

H. Yang (Sydney)
X.-J. Yang (Montréal, QC)
H. Yarwood (London)
S. J. Yarwood (Glasgow)
J. Ye (Sydney)
P. Yen (Taipei)
G. Yeo (Cambridge)

J. M. Zapata (Madrid)
Z. Zhang (Hunan)
X.-L. Zheng (Calgary, AB)
C.-Z. Zhou (Hefei)
X. Zhu (Cleveland, OH)
M. Ziegler (Bergen)

Index of Authors

	PAGE		PAGE		PAGE		PAGE
Abicht, H. K.	335	Gerez, E. N.	303	Luker, K. E.	433	Ray, P.	433
Abrie, J. A.	357	Gofman, Y.	381	Luo, D.-X.	273	Rosa, J. L.	345
Al-Salman, A.	273	González, A.	357	Luo, H.	311	Rouhier, N.	369
Aragón, C.	323			Luque, I.	443	Ruiz-Sanz, J.	443
Ariño, J.	357	Hashimoto, Y.	413				
		Hector, R. E.	241	Ma, J.	273	Sangaletti, R.	323
Bartrons, R.	345	Ho, B.	263	Machamer, C. E.	391	Selles, B.	369
Battle, A. M. d. C.	303	Huang, C.	273	Manzano, A.	345	Shai, Y.	381
Ben-Tal, N.	381	Huang, K.-F.	403	Mao, T.-L.	293	Shen, Y.	273
Bhargava, P.	253	Huang, M. C.	273	Martinez, J.	335	Singh, L. P.	263
Bossi, E.	323	Hugo, M.	369	Martin-Garcia, J. M.	443	Soliz, M.	335
Bowman, M. J.	241			Maset, F.	423	Spolaore, B.	423
Braker, J. D.	241	Jacquot, J.-P.	369	Matsuoka, M.	413	Srivastava, V.	369
Bu, Y.	273	Jahn, D.	335	Merklinger, E.	381	Strauss, E.	357
		Jiang, Y.	273	Mertens, J. A.	241		
Calò, L. A.	423	Jiménez, E.	323	Mihalko, L. A.	433	Tachi, N.	413
Cao, D.	273	Jordan, A.	345	Millán-Ariño, L.	345	Takayama, S.	433
Chandran, S.	391	Jordan, D. B.	241	Mo, Y.-Y.	273	Trujillo, M.	369
Chang, M.-C.	293			Morreale, A.	323		
Chen, C.-A.	293	Kedrov, A.	381				
Chen, J.	263	Kuo, W.-C.	403	Navarro-Sabate, À.	345	Ventura, F.	345
Chen, P.-J.	293			Novellademunt, L.	345		
Chen, Yi-Ling	403	Lancellotti, S.	423	Núñez, E.	323	Wagschal, K.	241
Chen, Yu-Li	293	Layer, G.	335			Wang, A. H.-J.	403
Cheng, W.-F.	293	Lee, C. C.	241	Obach, M.	345	Wilber, A.	273
Cherubino, F.	323	Lee, C.-H.	253	Oggianu, L.	423	Wingsle, G.	369
Chiang, Y.-C.	293	Lee, Y.-M.	403	Oliveri, L. M.	303	Wu, D.	311
		Leo-Macias, A.	323	Ortíz, Á. R.	323		
Davio, C.	303	Leshner-Perez, S.-C.	433				
De Cristofaro, R.	423	Lewin, S. A.	433	Panneerselvam, P.	263	Yan, R.	273
De Filippis, V.	423	Lin, H.-W.	293	Pérez-Siles, G.	323	Yu, Q.	283
Dien, B. S.	241	Lin Chiang, W.-H.	293	Pita, G.	323		
Ding, J. L.	263	Liu, L.	311	Pozzi, N.	423	Zeng, Q.	311
Dong, Z.	311	Liu, Z.	273			Zhao, Y.	273
Driessen, A. J. M.	381	Lo, Y.-C.	403	Radi, R.	369	Zheng, X.	283
		López-Corcuera, B.	323	Rapaport, D.	381	Zou, J.	311
Gambaro, G.	423	Luker, G. D.	433				