

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**L. J. Goodyear** • Boston, MA**S. V. Graham** • Philadelphia, PA**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** • Charlottesville, VA**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

Production Manager

M. D. Cunningham

Staff Editors

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

Editorial Assistant

C. V. Hooley

Administrative Editor, US Office

S. Schendel

S. Akira (Osaka)

J. Ariño (Barcelona)

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, VIC)

L. H. Boise (Atlanta, GA)

J. Bolaños (Salamanca)

P. J. Booth (Bristol)

L. Boscá (Madrid)

N. J. Buckley (London)

J. F. Cáceres (Edinburgh)

D. Carling (London)

M. Cascante (Barcelona)

Y.-G. Chen (Beijing)

L. Chernomordik (Bethesda, MD)

A. C. Clark (Raleigh, NC)

V. Darley-Usmar (Birmingham, AL)

M. J. Davies (Sydney)

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)

P. Fay (Rochester, NY)

R. Ferraris (Newark, NJ)

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

R. Golsteyn (Lethbridge, AB)

B. Halliwell (Singapore)

I. B. Holland (Orsay)

J. M. Horowitz (Raleigh, NC)

E. Ikonen (Helsinki)

A. Imberty (Grenoble)

D. A. Jans (Monash)

P.-S. Jayaraman (Birmingham)

D. Jordan (Peoria, IL)

M. G. Kazanietz (Philadelphia, PA)

D. Komander (Cambridge)

D. W. Laird (London, Ont.)

J. H. Lakey (Newcastle upon Tyne)

K. Lingelbach (Marburg)

D. W. Litchfield (London, Ont.)

P. S. Lorenzo (Honolulu, HI)

E. Manser (Singapore)

M. McManus (Palmerston North)

J. Miernyk (Columbia, MO)

E. T. Morgan (Atlanta, GA)

I. Morgan (Glasgow)

A. J. Morris (Lexington, KY)

M. Muckenthaler (Heidelberg)

B. Mulloy (South Mimms)

A. W. Munro (Manchester)

G. Murphy (Cambridge)

H. Y. Naim (Hannover)

W. Ogawa (Kobe)

G. Panayotou (Vare)

S. Patel (London)

G. Pavitt (Manchester)

N. D. Perkins (Newcastle)

L. Persson (Lund)

P. F. Pilch (Boston, MA)

W. C. Plaxton (Kingston, Ont.)

S. Ponnambalam (Leeds)

R. Y. Poon (Hong Kong)

Z. Radic (La Jolla, CA)

D. R. Richardson (Sydney)

K. Rittinger (London)

M. F. Roberts (Boston, MA)

J. M. Sanchez-Ruiz (Granada)

R. Sasisekharan (Cambridge, MA)

N. Savery (Bristol)

J. R. Sayers (Sheffield)

M. C. Seabra (London)

F. J. Sharom (Guelph, Ont.)

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

J. Slack (Minneapolis, MN)

E. Smythe (Sheffield)

S. Spiegel (Richmond, VA)

S. Stack (Columbia, MO)

W. M. Stark (Glasgow)

H. Stenmark (Oslo)

C. Tickle (Bath)

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

M. Torti (Pavia)

C. Tournier (Manchester)

C. Troy (New York, NY)

H. D. Ulrich (South Mimms)

M. van der Woude (York)

A. J. Vidal-Puig (Cambridge)

H. J. Vogel (Calgary)

M. Welham (Bath)

S. Whitney (Canberra)

C. Winterbourn (Christchurch, NZ)

D. Withers (London)

D. Wu (Guangzhou)

A. Xu (Hong Kong)

H. Xue (Shanghai)

H. Yagisawa (Hyogo-Ken)

I. Zachary (London)

C. Zurzolo (Paris)

- Journal compilation © 2010 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 2JL, 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 0264-6021/2010/\$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:** Microbiology at Leeds, University of Leeds; 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 biochemical knowledge. 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 equally with papers dealing with experimental work. 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 unreferenced 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 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 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 2010 volumes 425-432 (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 2010 are shown below. Subscribers to the *Biochemical Journal* can subscribe additionally to *Biochemical Society Transactions* and *Biochemistry and Applied Biochemistry* 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\$3922	£1934	€3373
Print and online	US\$3531	£1786	€3036
Online only	US\$180.50	£91	€155
Single issues (print only)			

Overseas rates include airfreight delivery. Airspeeded delivery is available at an additional cost of £80/€101.

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: Mark Burgess, Editorial Department, Portland Press Limited Third Floor, Charles Darwin House, 12 Roger Street, London WC1N 2JL, U.K., tel.: +44 (0)20 7685 2410; fax: +44 (0)20 7685 2469; email: editorial@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).

Review**A nuclear glutathione cycle within the cell cycle**

Published on the Internet 28 September 2010,
doi:10.1042/BJ20100409

P. Diaz Vivancos, T. Wolff, J. Markovic,
F.V. Pallardó and C.H. Foyer



169–178

Online Commentary**A new tool to dissect the function of p70 S6 kinase**

Published on the Internet 28 September 2010,
doi:10.1042/BJ20101445
(see accompanying paper, pp. 245–255)

B. Bilanges and B. Vanhaesebroeck

e1–e3

Research Papers**Human INO80 chromatin-remodelling complex contributes to DNA double-strand break repair via the expression of *Rad54B* and *XRCC3* genes**

Published as BJ Immediate Publication 5 August 2010,
doi:10.1042/BJ20100988

E.-J. Park, S.-K. Hur and J. Kwon



179–187

Characterization of the role of dendritic cells in prion transfer to primary neurons

Published as BJ Immediate Publication 30 July 2010,
doi:10.1042/BJ20100698

C. Langevin, K. Gousset, M. Costanzo,
O. Richard-Le Goff and C. Zurzolo



189–198

Domain structure elucidation of human decorin glycosaminoglycans

Published as BJ Immediate Publication 13 August 2010,
doi:10.1042/BJ20100788

T.N. Laremore, M. Ly, Z. Zhang, K. Solakyildirim,
S.A. McCallum, R.T. Owens and R.J. Linhardt



199–205

Botulinum neurotoxin serotype D attacks neurons via two carbohydrate-binding sites in a ganglioside-dependent manner

Published as BJ Immediate Publication 12 August 2010,
doi:10.1042/BJ20101042

J. Strotmeier, K. Lee, A.K. Völker, S. Mahrhold, Y. Zong,
J. Zeiser, J. Zhou, A. Pich, H. Bigalke, T. Binz, A. Rummel
and R. Jin



207–216

The inhibition of monocarboxylate transporter 2 (MCT2) by AR-C155858 is modulated by the associated ancillary protein

Published as BJ Immediate Publication 9 August 2010,
doi:10.1042/BJ20100890

M.J. Ovens, C. Manoharan, M.C. Wilson, C.M. Murray
and A.P. Halestrap



217–225

Key motifs in EBV (Epstein–Barr virus)-encoded protein kinase for phosphorylation activity and nuclear localization

Published as BJ Immediate Publication 12 August 2010,
doi:10.1042/BJ20100558

S. Gershburg, L. Murphy, M. Marschall and E. Gershburg

227–235

***HDHD1*, which is often deleted in X-linked ichthyosis, encodes a pseudouridine-5'-phosphatase**

Published as BJ Immediate Publication 20 August 2010,
doi:10.1042/BJ20100174

A. Preumont, R. Rzem, D. Vertommen and
E. Van Schaffingen

237–244

Characterization of PF-4708671, a novel and highly specific inhibitor of p70 ribosomal S6 kinase (S6K1)

Published as BJ Immediate Publication 12 August 2010,
doi:10.1042/BJ20101024

L.R. Pearce, G.R. Alton, D.T. Richter, J.C. Kath,
L. Lingardo, J. Chapman, C. Hwang
and D.R. Alessi



245–255

Cadmium regulates copper homeostasis by inhibiting the activity of Mac1, a transcriptional activator of the copper regulon, in *Saccharomyces cerevisiae*

Published as BJ Immediate Publication 30 July 2010,
doi:10.1042/BJ20100638

D.-H. Heo, I.-J. Baek, H.-J. Kang, J.-H. Kim, M. Chang,
M.-Y. Jeong, T.-H. Kim, I.-D. Choi and C.-W. Yun

257–265

Contents

Heart 6-phosphofructo-2-kinase activation by insulin requires PKB (protein kinase B), but not SGK3 (serum- and glucocorticoid-induced protein kinase 3)

*Published as BJ Immediate Publication 5 August 2010,
doi:10.1042/BJ20101089*

Epidermal growth factor down-regulates the expression of human hepatic stimulator substance via CCAAT/enhancer-binding protein β in HepG2 cells

*Published as BJ Immediate Publication 6 August 2010,
doi:10.1042/BJ20100671*

Molecular determination of selectivity of the site 3 modulator (BmK I) to sodium channels in the CNS: a clue to the importance of Na_v1.6 in BmK I-induced neuronal hyperexcitability

*Published as BJ Immediate Publication 2 August 2010,
doi:10.1042/BJ20100517*

Impairment of F₁F₀-ATPase, adenine nucleotide translocator and adenylate kinase causes mitochondrial energy deficit in human skin fibroblasts with chromosome 21 trisomy

*Published as BJ Immediate Publication 10 August 2010,
doi:10.1042/BJ20100581*

Contraction regulates site-specific phosphorylation of TBC1D1 in skeletal muscle

*Published as BJ Immediate Publication 11 August 2010,
doi:10.1042/BJ20101100*

V. Mouton, L. Toussaint, D. Vertommen, M.-A. Gueuning, L. Maisin, X. Havaux, C. Sanchez-Canedo, L. Bertrand, F. Dequiedt, B.A. Hemmings, L. Hue and M.H. Rider



267–275

L.-y. Dong, G. Sun, L. Jiang, L. Shao, Y. Hu, Y. Jiang, Y. Wang and W. An



277–287

H. He, Z. Liu, B. Dong, J. Zhou, H. Zhu and Y. Ji

289–298

D. Valenti, A. Tullo, M.F. Caratozzolo, R.S. Merafina, P. Scartezzini, E. Marra and R.A. Vacca



299–310

K. Vichaiwong, S. Purohit, D. An, T. Toyoda, N. Jessen, M.F. Hirshman and L.J. Goodyear



311–320

Editorial Advisory Panel

- L. Agius (Newcastle upon Tyne)
A. Aitken (Edinburgh)
S. Alexson (Huddinge)
L. Alhonen (Kuopio)
B. Allen (Montréal)
A. Aplin (Albany, NY)
- A. J. Baines (Canterbury)
M. P. Barrett (Glasgow)
G. J. Barritt (Adelaide)
A. Basak (Ottawa)
I. Behrmann (Luxembourg)
D. Benbrook (Oklahoma City)
A. M. Bennett (New Haven, CT)
R. Beyaert (Ghent)
C. D. Bingle (Sheffield)
G. E. Blair (Leeds)
G. B. Bolger (Birmingham, AL)
A. R. Boobis (London)
K. M. Botham (London)
V. M. M. Braga (London)
S. Bratton (Austin, TX)
D. N. Brindley (Edmonton, Alb.)
S. Broer (Canberra)
P. S. Brookes (Rochester, NY)
A. J. Brown (Sydney)
H. Brumer (Stockholm)
U. T. Brunk (Linköping)
N. Bryant (Glasgow)
N. J. Bulleid (Manchester)
T. D. Butters (Oxford)
- E. Cahoon (St. Louis, MO)
K. Cain (Leicester)
J. J. Calvete (Valencia)
D. Campopiano (Edinburgh)
L. Chamberlain (Edinburgh)
K. E. Chapman (Edinburgh)
Y. Chen (Shanghai)
C. H. K. Cheng (Hong Kong)
R. Chiesa (Milan)
A. K. Choudhury (Iowa City)
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)
R. Cramer (Davos)
C. E. Creutz (Charlottesville)
K. Croft (Perth)
P. Curnow (Bristol)
- C. Dani (Nice)
R. M. Daniel (Hamilton)
C. J. Danpure (London)
V. L. Davidson (Jackson, MS)
S. Dawson (Nottingham)
K. A. DeFea (Riverside, CA)
V. De Filippis (Padua)
A. DeLong (Providence, RI)
N. Demaurex (Geneva)
J.-B. Denault (Sherbrooke, QC)
E. Deuerling (Konstanz)
Q. Deveraux (San Diego)
P. W. Dickson (Callaghan)
M. Dillingham (Bristol)
J. Ding (Shanghai)
A. Dingley (Auckland)
S. Djordjevic (London)
F. E. Domann (Iowa City)
S. Dove (Birmingham)
C. P. Downes (Dundee)
J. A. Downs (Brighton)
A. Draeger (Bern)
K. Drickamer (London)
- E. Ellis (Glasgow)
J. A. Ellis (London)
P. M. Epstein (Farmington, CT)
C. Erneux (Brussels)
P. C. Evans (London)
- M. Falasca (London)
J. Fandrey (Essen)
K. M. Ferguson (Philadelphia)
M. C. Field (Cambridge)
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 (Sydney)
K. L. Gaston (Bristol)
K. Gaus (Sydney)
V. Gerke (Muenster)
M. Ginger (Lancaster)
A. Gomez-Muñoz (Bilbao)
M. Goppelt-Struebe (Erlangen)
P. R. Graves (Richmond, VA)
J. E. Gray (Sheffield)
N. K. Gray (Edinburgh)
F. Gribble (Cambridge)
S. Grinstein (Toronto)
G. Grogan (York)
D. Guerini (Basel)
A. H. Guse (Hamburg)
- A. P. Halestrap (Bristol)
A. Hall (New York)
M. B. Hampton (Christchurch, N.Z.)
P. A. Handford (Oxford)
J. Hanley (Bristol)
G. C. Hansson (Gothenburg)
J. L. Harris (San Diego)
R. K. Hartmann (Marburg)
G. M. Hatch (Winnipeg)
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)
K. Hinchliffe (Manchester)
M. Hodgkin (Coventry)
K. Hoebe (Cincinnati)
G. D. Holman (Bath)
M. J. Holness (London)
J. Horsfield (Dunedin)
M. D. Houslay (Glasgow)
W. E. Hughes (Sydney)
H. S. Hundal (Dundee)
A. N. Hunt (Southampton)
J. Huntington (Cambridge)
W. Hunziker (Singapore)
- C. M. Isacke (London)
H. Ischiropoulos (Philadelphia, PA)
P. B. Iynedjian (Geneva)
- E. L. Jacobson (Tucson, AZ)
S. Janecek (Bratislava)
J. Jensen (Oslo)
X. Jiang (New York)
J. Johansson (Uppsala)
N. C. Jones (Manchester)
L. B. Justement (Birmingham, AL)
- K. E. Kadler (Manchester)
E. Kalkhoven (Utrecht)
- H. H. Kampinga (Groningen)
D. J. Keeling (Loughborough)
G. J. Kemp (Liverpool)
I. D. Kerr (Nottingham)
A. J. Ketterman (Nakhon Pathom)
S. Keyse (Dundee)
M. R. Kini (Singapore)
L. Kjellen (Uppsala)
E. Klipp (Berlin)
E. Knecht (Valencia)
D. Komander (Cambridge)
O. A. Kost (Moscow)
O. H. Kramer (Jena)
J. Kwon (Seoul)
- W. Laing (Auckland)
S. Lamande (Melbourne)
D. A. Lane (London)
D. J. R. Lane (Sydney)
A. LeBlanc (Montréal)
J.-Y. Lee (Newark, DE)
P. Lefebvre (Lille)
M. Leippe (Kiel)
C. C. Leslie (Denver)
T. Levade (Toulouse)
R. Lightowers (Newcastle upon Tyne)
C. Lindon (Cambridge)
J. S. Lindsey (Pullman, WA)
K. L. Linton (London)
H. J. Lipps (Witten)
D. Liu (Beijing)
O. Lockridge (Omaha, NE)
J. M. Lord (Coventry)
M. Lowe (Manchester)
N. Lowndes (Galway)
A. Luckhoff (Aachen)
K. A. Lukyanov (Moscow)
M. Lyon (Manchester)
- J. A. MacDonald (Calgary)
D. J. MacEwan (Norwich)
L. Mach (Vienna)
J. MacKrell (Cork)
R. Madhubala (New Delhi)
G. Maga (Pavia)
A. I. Magee (London)
C. C. Malbon (Stony Brook, NY)
R. K. Mallampalli (Iowa City)
J. P. G. Malthouse (Dublin)
G. E. Mann (London)
J. S. Marchant (Minneapolis)
J. Martin (Tübingen)
P. E. Martin (Glasgow)
R. W. Mason (Wilmington, DE)
A. E. Mast (Milwaukee, WI)
A. Matagne (Liège)
S. Matthews (Dundee)
M. J. McConville (Melbourne)
I. J. McEwan (Aberdeen)
D. McIntosh (London)
A. G. McLennan (Liverpool)
D. W. Meek (Dundee)
A. R. Merrill (Guelph)
E. Metzen (Luebeck)
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)
A. Morgan (Liverpool)
S. Morley (Brighton)
H. Munshi (Chicago)
S. Murphy (Oxford)
- H. Nagase (London)
V. Natarajan (Chicago)
- A. R. Nebreda (Madrid)
P. Newsholme (Dublin)
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, N.Z.)
R. Palmer (Umeå)
F. Palmieri (Bari)
K. Pantopoulos (Montréal)
R. B. Parsons (London)
L. J. Partridge (Sheffield)
M. Pastor-Anglada (Barcelona)
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. Prior (Liverpool)
M. Pusch (Genova)
- W. Qin (Thunder Bay, ON)
B. Qualmann (Magdeburg)
- S. Rahman (Kuala Lumpur)
D. P. Ramji (Cardiff)
E. L. Raven (Leicester)
B. Reaves (Athens, GA)
S. Rebuffat (Paris)
R. J. Reece (Manchester)
G. A. Reid (Edinburgh)
P. S. Rennie (Vancouver)
O. Rey (Los Angeles)
I. Richard (Evry)
S. J. Richardson (Bundoora)
C. C. Rider (Egham)
M. H. Rider (Brussels)
D. J. Riese (West Lafayette, IN)
N. J. Robinson (Newcastle upon Tyne)
S. Rocha (Dundee)
L. Rönstrand (Malmö)
J. Rouse (Dundee)
E. Rubinstein (Villejuif)
F. Ruggiero (Lyon)
- J.-M. Sabatier (Marseille)
D. B. Sacks (Boston, MA)
P. Saftig (Kiel)
J. P. Salier (Rouen)
M. L. Schmitz (Giessen)
L. Schomburg (Berlin)
N. S. Scrutton (Manchester)
L. C. Serpell (Brighton)
J. K. Sethi (Cambridge)
B. Sha (Birmingham, AL)
Y. Shai (Rehovot)
L. M. Shantz (Hershey, PA)
S. B. Shears (Research Triangle Park, NC)
T. Shimizu (Sendai)
J. Shorter (Philadelphia, PA)
K. Siddle (Cambridge)
L. Sistonen (Turku)

EDITORIAL ADVISORY PANEL (continued)

A. G. Smith (Leicester)
D. M. Smith (Macclesfield)
M. A. Smith (Cleveland, OH)
M. Soberon (Cuernavaca)
M. Solioz (Bern)
S. Souchelnytskyi (Solna)
J. Spencer (Bristol)
F. Spener (Graz)
M. J. R. Stark (Dundee)
H. R. Stennicke (Bagsvaerd)
G. S. Stewart (Birmingham)
W. Stöcker (Mainz)
A. Y. Strongin (La Jolla, CA)
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)
P. J. Tonge (Stony Brook, NY)
K. Török (London)
J. Tovar-Torres (Egham)
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)
M. P. Walsh (Calgary)
F. Wan (Bethesda, MD)
H.-G. Wang (Hershey, PA)
M. J. Warren (Canterbury)
S. P. Watson (Birmingham)
R. H. Wenger (Zürich)
G. Werner-Felmayer (Innsbruck)
D. A. White (Birmingham)
J. Whitehead (Brisbane)
I. Wilson (Wien)
J.-O. Winberg (Tromsø)
S. J. Winder (Sheffield)
S. G. Withers (Vancouver)
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 (Montreal)
H. Yarwood (London)
J. Ye (Sydney)
P. Yen (Taipei)
G. Yeo (Cambridge)

J. M. Zapata (Madrid)
Z. Zhang (Hunan)
X.-L. Zheng (Calgary)
M. Ziegler (Bergen)

Index of Authors

	PAGE		PAGE		PAGE		PAGE
Alessi, D. R.	245	Havaux, X.	267	Mahrhold, S.	207	Shao, L.	277
Alton, G. R.	245	He, H.	289	Maisin, L.	267	Solakyildirim, K.	199
An, D.	311	Hemmings, B. A.	267	Manoharan, C.	217	Strotmeier, J.	207
An, W.	277	Heo, D.-H.	257	Markovic, J.	169	Sun, G.	277
		Hirshman, M. F.	311	Marra, E.	299		
Baek, I.-J.	257	Hu, Y.	277	Marschall, M.	227	Toussaint, L.	267
Bertrand, L.	267	Hue, L.	267	McCallum, S. A.	199	Toyoda, T.	311
Bigalke, H.	207	Hur, S.-K.	179	Merafina, R. S.	299	Tullo, A.	299
Bilanges, B.	e1	Hwang, C.	245	Mouton, V.	267		
Binz, T.	207			Murphy, L.	227	Vacca, R. A.	299
		Jeong, M.-Y.	257	Murray, C. M.	217	Valenti, D.	299
Caratozzolo, M. F.	299	Jessen, N.	311			Vanhaesebroeck, B.	e1
Chang, M.	257	Ji, Y.	289	Ovens, M. J.	217	Van Schaftingen, E.	237
Chapman, J.	245	Jiang, L.	277	Owens, R. T.	199	Vertommen, D.	237, 267
Choi, I.-D.	257	Jiang, Y.	277			Vichaiwong, K.	311
Costanzo, M.	189	Jin, R.	207	Pallardó, F. V.	169	Völker, A. K.	207
				Park, E.-J.	179		
Dequiedt, F.	267	Kang, H.-J.	257	Pearce, L. R.	245	Wang, Y.	277
Diaz Vivancos, P.	169	Kath, J. C.	245	Pich, A.	207	Wilson, M. C.	217
Dong, B.	289	Kim, J.-H.	257	Preumont, A.	237	Wolff, T.	169
Dong, L.-y.	277	Kim, T.-H.	257	Purohit, S.	311		
		Kwon, J.	179			Yun, C.-W.	257
Foyer, C. H.	169			Richard-Le Goff, O.	189		
		Langevin, C.	189	Richter, D. T.	245	Zeiser, J.	207
Gershburg, E.	227	Laremore, T. N.	199	Rider, M. H.	267	Zhang, Z.	199
Gershburg, S.	227	Lee, K.	207	Rummel, A.	207	Zhou, Jie	207
Goodyear, L. J.	311	Lingardo, L.	245	Rzem, R.	237	Zhou, Jingjing	289
Gousset, K.	189	Linhardt, R. J.	199			Zhu, H.	289
Gueuning, M.-A.	267	Liu, Z.	289	Sanchez-Canedo, C.	267	Zong, Y.	207
		Ly, M.	199	Scartezzini, P.	299	Zurzolo, C.	189
Halestrap, A. P.	217						