

Editorial Board

Chair

G. Banting • Bristol

Vice Chair, The Americas

G. Salvesen • La Jolla, CA

Reviews Editor

A. Toker • Boston, MA

Deputy Chairs

D. R. Alessi • Dundee

S. V. Graham • Glasgow

S. Gutteridge • Newark, DE

D. Hoekstra • Groningen

N. M. Hooper • Leeds

S. Huber • Urbana, IL

J. P. Kehrer • Pullman, WA

J. Ladbury • London

C. MacKintosh • Dundee

K. H. Mayo • Minneapolis, MN

M. Murphy • Cambridge

S. Roberts • Manchester

P. R. Shepherd • Auckland

D. Tosh • Bath

H. M. Wallace • Aberdeen

M. P. Walsh • Calgary

Publisher

P. J. Starley

Executive Editor

M. R. Thorne

Production Manager

M. D. Cunningham

Senior Staff Editor

S. M. Hobday

Staff Editors

L. Ball

E. A. G. Elloway

J. W. Mockridge

Editorial Assistants

C. L. Curtis

J. C. Meredith

Administrative Editor, US Office

S. Schendel

J. Arino (Barcelona)

A. Baici (Zurich)

J. L. Blank (Cambridge, MA)

M. Blatt (Glasgow)

P. G. Board (Canberra)

M. A. Bogoyevitch (Perth, WA)

P. J. Booth (Bristol)

A. Boraston (Victoria, BC)

L. Bosca (Madrid)

Y. Bourne (Marseille)

B. Brüne (Frankfurt)

N. J. Buckley (London)

D. Carling (London)

I. Collinson (Bristol)

G. P. Côté (Kingston, Ont.)

J. R. Couchman (London)

V. Darley-USmar (Birmingham, AL)

D. M. Davis (London)

D. A. Day (Sydney)

R. Docampo (Athens, GA)

D. Doyle (Oxford)

C. S. Duckett (Ann Arbor, MI)

B. Engelmann (Munich)

P. Fay (Rochester, NY)

R. Ferraris (Newark, NJ)

B. Foxwell (London)

J.-M. Frère (Liège)

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

D. A. F. Gillespie (Glasgow)

R. Golsteyn (Croissy-sur-Seine)

S. Goodbourn (London)

L. J. Goodyear (Boston, MA)

P. A. Grimaldi (Nice)

B. Hallberg (Umeå)

B. Halliwell (Singapore)

P. I. Haris (Leicester)

L. Hedstrom (Waltham, MA)

F. G. Hegardt (Barcelona)

S. High (Manchester)

I. B. Holland (Orsay)

J. Hsuan (London)

D. Jordan (Peoria, IL)

B. Kalyanaraman (Milwaukee, WI)

M. G. Kazanietz (Philadelphia, PA)

G. F. King (Farmington, CT)

I. M. Kovach (Washington D.C.)

D. W. Laird (London, Ont.)

J. H. Lakey (Newcastle upon Tyne)

R. Leduc (Sherbrooke)

M. A. Lemmon (Philadelphia, PA)

D. W. Litchfield (London, Ont.)

L. Machesky (Birmingham)

E. Manser (Singapore)

P. Maurel (Montpellier)

M. McManus (Palmerston North)

M. Meisterernst (Munich)

J. Miernyk (Columbia, MO)

I. Morgan (Glasgow)

A. J. Morris (Lexington, KY)

B. Mulloy (South Mimms)

A. W. Munro (Manchester)

H. Y. Naim (Hannover)

M. E. Noble (Oxford)

L. M. Obeid (Charleston)

G. Panayotou (Vare)

M. Parenti (Monza)

M. A. J. Parry (Harpending)

S. Patel (London)

G. Pavitt (Manchester)

M. Paulsson (Cologne)

L. Persson (Lund)

A. D. Postle (Southampton)

D. R. Richardson (Sydney)

J. Sandy (Tampa)

N. Savery (Bristol)

J. R. Sayers (Sheffield)

M. A. Schwartz (Charlottesville, VA)

M. C. Seabra (London)

S. C. Sealton (New York, NY)

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

A. Sim (Callaghan, NSW)

B. F. Sloane (Detroit, MI)

E. Smythe (Sheffield)

S. Spiegel (Richmond, VA)

S. Stack (Chicago, IL)

C. W. Taylor (Cambridge)

M. Thumm (Goettingen)

M. Torti (Pavia)

C. Troy (New York, NY)

D. M. F. van Aalten (Dundee)

M. van der Woude (York)

B. Vanhaesebroeck (London)

S. G. Ward (Bath)

M. Welham (Bath)

S. Whitney (Canberra)

C. Winterbourn (Christchurch, NZ)

J. York (Durham, NC)

C. Zurzolo (Paris)



- The Biochemical Society, London © 2007
- The *Biochemical Journal* (ISSN 0264-6021 for print/online journal; ISSN 1470-8728 for online only journal) is published and distributed by Portland Press Ltd on behalf of the Biochemical Society (the owner), and appears twice monthly.
- **Editorial and publishing offices:** *Biochemical Journal*, Portland Press Ltd, Third Floor, Eagle House, 16 Procter Street, London WC1V 6NX, U.K.
- **Biochemical Journal**, c/o Mercury Airfreight International Ltd, 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 0264-6021/2007/\$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 Airfreight International Ltd, 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; M. Duchon and V. Mohamed-Ali, University College, London; Nottingham *Arabidopsis* Stock Centre (NASC); G. P. Côté, Kingston, Ont.; G. Salvesen, La Jolla; Dr Gordon Beahes, University of Newcastle upon Tyne.

● **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. Papers reporting nucleotide sequences only are not acceptable as APs. 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.

● **Queries and correspondence** Authors in the Americas should address all queries and correspondence about their submission to: Dr Sharon Schendel, BJ USA, The Burnham Institute, 10901 N. Torrey Pines Road, La Jolla, CA 92037, U.S.A. (telephone +1 858 713 6283; fax +1 858 713 6284; 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 Ltd, Third Floor, Eagle House, 16 Procter Street, London WC1V 6NX, U.K. (telephone +44 20 7280 4110; fax +44 20 7280 4169; email editorial@portlandpress.com).

● **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>

● **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.

Other information

The *Biochemical Journal* is published and distributed by Portland Press Ltd on behalf of the Biochemical Society. It is published twice monthly; in 2007 volumes 401–408 (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 2007 are shown below. Subscribers to the *Biochemical Journal* can subscribe additionally to *Biochemical Society Transactions* and *Bio-technology 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) Print and online	US\$3275	£1728	€2940
Online only	US\$2815	£1490	€2528
Single issues (print only)	US\$161.50	£85	€144.50

Overseas rates include airfreight delivery. Airspeeded delivery is available at an additional cost of US\$135/£70/€120.

Value Added Tax (VAT) on online-only and 'combined' subscriptions at 17.5% 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 102–336 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 Ltd, Third Floor, Eagle House, 16 Procter Street, London WC1V 6NX, U.K., tel.: +44 (0)20 7280 4110, fax: +44 (0)20 7280 4169, 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 breaching process used for the pulp is 100% ECF (elemental chlorine free).

Reviews**Metabolite transport across the peroxisomal membrane**

Published on the Internet 21 December 2006,
doi:10.1042/BJ20061352

W.F. Visser, C.W.T. van Roermund, L. IJlst,
H.R. Waterham and R.J.A. Wanders

365–375

Big roles for small GTPases in the control of directed cell movement

Published on the Internet 21 December 2006,
doi:10.1042/BJ20061432

P.G. Charest and R.A. Firtel

377–390

Online Commentary

Unusual phyletic distribution of peptidases as a
tool for indentifying potential drug targets

Published on the Internet 21 December 2006,
doi:10.1042/BJ20061613

N.D. Rawlings

e5–e7

Research Papers

p90 RSK-1 associates with and inhibits neuronal
nitric oxide synthase

Published as BJ Immediate Publication 19 September 2006,
doi:10.1042/BJ20060580

T. Song, K. Sugimoto, H. Ihara, A. Mizutani, N. Hatano,
K. Kume, T. Kambe, F. Yamaguchi, M. Tokuda
and Y. Watanabe

391–398

Two metalloprotease peptidases from the protozoan
Trypanosoma cruzi belong to the M32 family, found
so far only in prokaryotes

Published as BJ Immediate Publication 28 September 2006,
doi:10.1042/BJ20060973

G. Niemirowicz, F. Parussini, F. Agüero
and J.J. Cazzulo

399–410



15-Deoxyspergualin inhibits eukaryotic protein
synthesis through eIF2 α phosphorylation

Published as BJ Immediate Publication 5 September 2006,
doi:10.1042/BJ20060879

T.N.C. Ramya, N. Surolia and A. Surolia

411–420

Mutagenesis and crystallographic studies of the
catalytic residues of the papain family protease
bleomycin hydrolase: new insights into active-site
structure

Published as BJ Immediate Publication 28 September 2006,
doi:10.1042/BJ20060641

P.A. O'Farrell and L. Joshua-Tor

421–428

Tax1-binding protein 1 is expressed in the retina
and interacts with the GABA_C receptor ρ 1 subunit

Published as BJ Immediate Publication 25 September 2006,
doi:10.1042/BJ20061036

M. Ulrich, S. Seeber, C.-M. Becker and R. Enz

429–436

Interaction of mammalian Hsp22 with lipid
membranes

Published as BJ Immediate Publication 5 October 2006,
doi:10.1042/BJ20061046

T.K. Chowdary, B. Raman, T. Ramakrishna and Ch.M. Rao

437–445

MEGF9: a novel transmembrane protein with a
strong and developmentally regulated expression
in the nervous system

Published as BJ Immediate Publication 18 September 2006,
doi:10.1042/BJ20060691

U. Brandt-Bohne, D.R. Keene, F.A. White and M. Koch

447–457



Identification of a mitochondrial alcohol
dehydrogenase in *Schizosaccharomyces pombe*:
new insights into energy metabolism

Published as BJ Immediate Publication 25 September 2006,
doi:10.1042/BJ20061181

P.G. Crichton, C. Affoufrit and A.L. Moore

459–464

Glutamine gluconeogenesis in the small intestine of 72 h-fasted adult rats is undetectable <i>Published as BJ Immediate Publication 27 September 2006,</i> <i>doi:10.1042/BJ20061148</i>	G. Martin, B. Ferrier, A. Conjard, M. Martin, R. Nazaret, M. Boghossian, F. Saadé, C. Mancuso, D. Durozard and G. Baverel	465–473
Proteinase K-sensitive disease-associated ovine prion protein revealed by conformation-dependent immunoassay <i>Published as BJ Immediate Publication 3 October 2006,</i> <i>doi:10.1042/BJ20061264</i>	A.M. Thackray, L. Hopkins and R. Bujdoso	475–483
Kinetic diversity in G-protein-coupled receptor signalling <i>Published as BJ Immediate Publication 21 September 2006,</i> <i>doi:10.1042/BJ20060517</i>	V.L. Katanaev and M. Chornomoretz	485–495
Generation and release of nitrotyrosine <i>O</i> -sulfate by HepG2 human hepatoma cells upon SIN-1 stimulation: identification of SULT1A3 as the enzyme responsible <i>Published as BJ Immediate Publication 27 September 2006,</i> <i>doi:10.1042/BJ20060536</i>	S. Yasuda, S. Idell and M.-C. Liu	497–503
<i>SLC41A2</i> encodes a plasma-membrane Mg ²⁺ transporter <i>Published as BJ Immediate Publication 19 September 2006,</i> <i>doi:10.1042/BJ20060673</i>	J. Sahni, B. Nelson and A.M. Scharenberg	505–513
Determination of the external loops and the cellular orientation of the N- and the C-termini of the human organic anion transporter hOAT1 <i>Published as BJ Immediate Publication 3 October 2006,</i> <i>doi:10.1042/BJ20061171</i>	M. Hong, K. Tanaka, Z. Pan, J. Ma and G. You	515–520
Phosphorylation of the proline-rich domain of Xp95 modulates Xp95 interaction with partner proteins <i>Published as BJ Immediate Publication 18 September 2006,</i> <i>doi:10.1042/BJ20061287</i>	R.E. DeJournett, R. Kobayashi, S. Pan, C. Wu, L.D. Etkin, R.B. Clark, O. Bögler and J. Kuang	521–531
NMR characterization of the pH 4 β -intermediate of the prion protein: the N-terminal half of the protein remains unstructured and retains a high degree of flexibility <i>Published as BJ Immediate Publication 8 September 2006,</i> <i>doi:10.1042/BJ20060668</i>	D.B.D. O'Sullivan, C.E. Jones, S.R. Abdelraheim, A.R. Thompsett, M.W. Brazier, H. Toms, D.R. Brown and J.H. Viles	533–540
Resistance to alkyl-lysophospholipid-induced apoptosis due to downregulated sphingomyelin synthase 1 expression with consequent sphingomyelin- and cholesterol-deficiency in lipid rafts <i>Published as BJ Immediate Publication 19 October 2006,</i> <i>doi:10.1042/BJ20061178</i>	A.H. van der Luit, M. Budde, S. Zerp, W. Caan, J.B. Klarenbeek, M. Verheij and W.J. van Blitterswijk	541–549
Mutagenesis and mechanistic study of a glycoside hydrolase family 54 α -L-arabinofuranosidase from <i>Trichoderma koningii</i> <i>Published as BJ Immediate Publication 27 September 2006,</i> <i>doi:10.1042/BJ20060717</i>	C.-F. Wan, W.-H. Chen, C.-T. Chen, M.D.-T. Chang, L.-C. Lo and Y.-K. Li	551–558
The regulation of ATF3 gene expression by mitogen-activated protein kinases <i>Published as BJ Immediate Publication 3 October 2006,</i> <i>doi:10.1042/BJ20061081</i>	D. Lu, J. Chen and T. Hai	559–567
Purification and membrane reconstitution of catalytically active Menkes copper-transporting P-type ATPase (MNK; ATP7A) <i>Published as BJ Immediate Publication 29 September 2006,</i> <i>doi:10.1042/BJ20060924</i>	Y.H. Hung, M.J. Layton, I. Voskoboinik, J.F.B. Mercer and J. Camakaris	569–579
The Walker B motif of the second nucleotide-binding domain (NBD2) of CFTR plays a key role in ATPase activity by the NBD1–NBD2 heterodimer <i>Published as BJ Immediate Publication 21 September 2006,</i> <i>doi:10.1042/BJ20060968</i>	F.L.L. Stratford, M. Ramjeesingh, J.C. Cheung, L.-J. Huan and C.E. Bear	581–586



Degradation of extracellular matrix and its components by hypobromous acid <i>Published as BJ Immediate Publication 3 October 2006,</i> <i>doi:10.1042/BJ20061236</i>	M.D. Rees, T.N. McNiven and M.J. Davies	587–596
Modulation of drug-stimulated ATPase activity of human MDR1/P-glycoprotein by cholesterol <i>Published as BJ Immediate Publication 10 October 2006,</i> <i>doi:10.1042/BJ20060632</i>	Y. Kimura, N. Kioka, H. Kato, M. Matsuo and K. Ueda	597–605
Biosynthesis of the dystonia-associated AAA ⁺ ATPase torsinA at the endoplasmic reticulum <i>Published as BJ Immediate Publication 12 October 2006,</i> <i>doi:10.1042/BJ20061313</i>	A.C. Callan, S. Bunning, O.T. Jones, S. High and E. Swanton	607–612

Editorial Advisory Panel

- M. Abrahamson (Lund)
L. Agius (Newcastle upon Tyne)
P. Aisen (New York)
A. Aitken (Edinburgh)
B. Akerström (Lund)
S. Aldred (Birmingham)
S. Alexson (Huddinge)
L. Alhonen (Kuopio)
B. Allen (Montréal)
A. Aplin (Albany, NY)
B. Ashby (Philadelphia)
K. S. Authi (London)
- A. J. Baines (Canterbury)
F. A. Barr (Martinsried)
M. P. Barrett (Glasgow)
G. J. Barritt (Adelaide)
C. H. Barton (Southampton)
J. F. Bateman (Parkville)
G. Baverel (Lyon)
I. Behrmann (Luxembourg)
D. R. Bell (Nottingham)
D. S. Bendall (Cambridge)
A. Benedetti (Siena)
J. P. Bennett (Hull/York)
A. Berry (Leeds)
R. J. Beynon (Liverpool)
O. Billker (London)
C. D. Bingle (Sheffield)
G. Black (Newcastle upon Tyne)
D. J. Blackburn (Birmingham)
G. E. Blair (Leeds)
G. B. Bolger (Birmingham, AL)
R. A. Bonomo (Cleveland, OH)
A. R. Boobis (London)
M. D. Bootman (Cambridge)
K. M. Botham (London)
E. Brailoiu (Philadelphia)
S. Bratton (Austin, TX)
D. Brdiczka (Konstanz)
R. G. Brennan (Portland, OR)
D. N. Brindley (Edmonton, Alb.)
S. Broer (Canberra)
A. Brown (Sydney)
G. Brown (Birmingham)
H. Brumer (Stockholm)
U. T. Brunk (Linköping)
N. Bryant (Glasgow)
N. J. Bulleid (Manchester)
S. J. W. Busby (Birmingham)
- K. Cain (Leicester)
J. J. Calvete (Valencia)
E. A. Carrey (London)
C. Casals (Madrid)
A. M. Caswell (Leeds)
R. A. J. Challiss (Leicester)
L. Chamberlain (Glasgow)
K. E. Chapman (Edinburgh)
A. Charriot (Liege)
Y. Chen (Indianapolis)
C. H. K. Cheng (Hong Kong)
R. Chiesa (Milan)
A. K. Choudhury (Rochester, MN)
U. Christensen (Copenhagen)
M. C. M. Chung (Singapore)
A. C. Clark (Raleigh, NC)
P. Codogno (Villejuif)
P. Cohen (Dundee)
S. J. Cook (Cambridge)
J. R. Coorsen (Calgary)
A. P. Corfield (Bristol)
D. A. Cowan (Cape Town)
R. Crameri (Davos)
C. E. Creutz (Charlottesville)
K. Croft (Perth)
M. Crossley (Sydney)
C. M. Cuchillo (Barcelona)
J. M. Cuezva (Madrid)
W. Cushley (Glasgow)
- K. N. Dalby (Austin, TX)
C. Dani (Nice)
- R. M. Daniel (Hamilton)
C. J. Danpure (London)
V. L. Davidson (Jackson, MS)
M. J. Davies (Sydney)
S. Dawson (Nottingham)
C. Day (Dunedin)
V. De Filippis (Padua)
H. De Groot (Essen)
H. R. De Jonge (Rotterdam)
L. V. Dekker (Cambridge)
A. DeLong (Providence, RI)
N. Demaurex (Geneva)
Q. Deveraux (San Diego)
J. Ding (Shanghai)
C. Dingwall (London)
S. Djordjevic (London)
F. E. Domann (Iowa City)
D. Donner (San Francisco)
C. J. Dorman (Dublin)
K. T. Douglas (Manchester)
S. Dove (Birmingham)
C. P. Downes (Dundee)
J. A. Downs (Cambridge)
A. Draeger (Bern)
K. Drickamer (London)
M. A. Driscoll (Piscataway, NJ)
B. K. Drøbak (Norwich)
R. M. Drummond (Glasgow)
M. Duchon (London)
M. J. Dufton (Glasgow)
- J. M. Edwardson (Cambridge)
L. Ellerby (Novato)
E. Ellis (Glasgow)
A. P. Enyedi (Budapest)
P. M. Epstein (Farmington)
F. Erdodi (Debrecen)
C. Erneux (Brussels)
- T. Feizi (London)
S. Ferguson-Miller (East Lansing, MI)
L. M. Field (Harpending)
M. C. Field (Cambridge)
L. M. Fisher (London)
P. R. Flatt (Coleraine)
D. R. Flower (Newbury)
G. Forloni (Milan)
F. Foufelle (Paris)
K. R. Fox (Southampton)
M. S. Francis (Umeå)
P. Fuentes-Prior (Barcelona)
- C. G. Gahmberg (Helsinki)
J. T. Gallagher (Manchester)
T. Galli (Paris)
J. C. García-Barrón (Murcia)
K. D. Garlid (Portland, OR)
B. Garner (Sydney)
M. Gassman (Zurich)
K. Gaus (Sydney)
B. Geiger (Rehovot)
V. Gerke (Muenster)
J. D. Gitlin (St Louis, MO)
D. E. Goll (Tucson, AZ)
A. Gomez-Muñoz (Bilbao)
M. Goppelt-Struebe (Erlangen)
R. A. Gottlieb (La Jolla)
G. W. Gould (Glasgow)
I. Gout (London)
L. Graeve (Stuttgart)
J. C. Gray (Cambridge)
J. E. Gray (Sheffield)
N. K. Gray (Edinburgh)
A. W. Griffioen (Maastricht)
S. Grinstein (Toronto)
T. Grune (Dusseldorf)
D. Guerini (Basel)
S. J. Gunst (Indianapolis)
A. H. Guse (Hamburg)
- A. P. Halestrap (Bristol)
A. Hall (London)
- G. C. Hansson (Gothenburg)
J. Harris (San Diego)
R. K. Hartmann (Marburg)
G. M. Hatch (Winnipeg)
P. T. Hawkins (Cambridge)
J. D. Hayes (Dundee)
B. Henrissat (Marseille)
T. P. Herbert (Leicester)
K. Heremans (Leuven)
A. C. Herington (Brisbane)
H. Hiasa (Minneapolis)
K. Hinchliffe (Manchester)
J. A. Hiscox (Leeds)
M. Hodgkin (Coventry)
K. Hoebe (La Jolla)
J.-H. S. Hofmeyr (Matieland)
A. A. Holder (London)
G. D. Holman (Bath)
M. J. Holness (London)
D. Holowka (Ithaca, NY)
J. Horowitz (Raleigh, NC)
M. D. Houslay (Glasgow)
A. Hudmon (West Haven, CT)
H. Hundal (Dundee)
J. Huntingdon (Cambridge)
W. Hunziker (Singapore)
I. Hussain (Harlow)
J. C. Hutton (Denver)
E. I. Hyde (Birmingham)
- R. A. Iles (London)
A. Imberty (Grenoble)
J. M. Inal (London)
G. B. Irvine (Belfast)
R. E. Isaac (Leeds)
C. M. Isacke (London)
H. Ischiropoulos (Philadelphia, PA)
T. Ishikawa (Yokohama)
P. B. Iynedjian (Geneva)
- E. L. Jacobson (Tucson, AZ)
K. H. Jakobs (Essen)
P. Jameson (Christchurch)
S. Janecek (Bratislava)
D. R. Janero (Bedford, MA)
S. M. Jarvis (London)
N. C. Jones (Manchester)
S. K. Joseph (Philadelphia, PA)
L. B. Justement (Birmingham, AL)
- K. E. Kadler (Manchester)
E. Kalkhoven (Utrecht)
P. Karran (South Mimms)
S. Kato (Tokyo)
D. J. Keeling (Loughborough)
G. J. Kemp (Liverpool)
P. J. Kennelly (Blacksburg, VA)
A. J. Ketterman (Nakhon Pathom)
S. Keyse (Dundee)
M. R. Kini (Singapore)
T. M. Kitson (Palmerston North)
L. Kjellen (Uppsala)
E. Klipp (Berlin)
E. Knecht (Valencia)
W. Kolch (Glasgow)
O. A. Kost (Moscow)
Y. Kuroki (Sapporo)
J. Kuznicki (Warsaw)
J. Kwon (Seoul)
- E. W. Lam (London)
S. Lamande (Parkville, Vic.)
D. A. Lane (London)
M. Laurent (Orsay)
D. S. Leake (Reading)
A. LeBlanc (Quebec)
P. Lefebvre (Lille)
M. Leippe (Kiel)
P. J. Lenting (Utrecht)
C. C. Leslie (Denver)
T. Levade (Toulouse)
R. E. Lewis (Omaha, NE)
- R. Lightowers
(Newcastle upon Tyne)
- J. R. Lillehaug (Bergen)
K. A. Lillycrop (Southampton)
J. S. Lindsey (Pullman, WA)
D. Liu (Beijing)
J. M. Lord (Coventry)
P. S. Lorenzo (Honolulu)
M. Lowe (Manchester)
A. Luckhoff (Aachen)
R. Ludowyke (Sydney)
K. A. Lukyanov (Moscow)
P. A. Lund (Birmingham)
M. Lyon (Manchester)
- J. A. MacDonald (Calgary)
D. J. MacEwan (Norwich)
L. Mach (Vienna)
J. Mackrill (Cork)
G. Maga (Pavia)
A. I. Magee (London)
C. C. Malbon (Stony Brook, NY)
W. A. Maltese (Toledo, OH)
J. P. G. Malthouse (Dublin)
V. Mamidipudi (Stanford, CA)
G. E. Mann (London)
J. S. Marchant (Minneapolis)
D. Martin (Dundee)
J. Martin (Tübingen)
P. Martin (Glasgow)
R. W. Mason (Wilmington)
A. E. Mast (Milwaukee, WI)
A. Matagne (Leige)
S. Matthews (Dundee)
B. Mayer (Graz)
M. J. McConville (Parkville)
I. J. McEwan (Aberdeen)
R. A. J. McIlhinney (Oxford)
D. McIntosh (London)
L. McLellan (Dundee)
A. G. McLennan (Liverpool)
P. A. Meacock (Leicester)
D. W. Meek (Dundee)
A. K. Menon (Madison)
A. R. Merrill (Guelph)
E. Metzen (Luebeck)
D. J. Meyer (London)
A. H. Millar (Crawley, West. Aus.)
E. M. Mills (Austin, TX)
J. L. A. Mitchell (DeKalb, IL)
V. Mizrahi (Johannesburg)
H. Y.-K. Mok (Singapore)
G. Molle (Montpellier)
G. B. Moorhead (Calgary)
A. Morgan (Liverpool)
S. Morley (Brighton)
S. M. Morris (Pittsburgh)
N. Moustaid Moussa (Knoxville, TN)
A. Moustakas (Uppsala)
W. Muller-Esterl (Frankfurt)
G. Murphy (Cambridge)
- H. Nagase (London)
T. Nagatsu (Aichi)
V. Natarajan (Baltimore)
A. R. Nebreda (Madrid)
P. Newsholme (Dublin)
R. Nibbs (Glasgow)
S. Nicholson (Parkville)
C. Nobes (Bristol)
R. I. Norman (Leicester)
M. A. Nugent (Boston, MA)
- T. Oberley (Madison, WI)
R. M. O'Doherty (Pittsburgh)
J. O'Donnell (Memphis)
V. O'Donnell (Cardiff)
K. Omori (Saitama)
L. A. J. O'Neill (Dublin)
R. P. J. Oude Elferink (Amsterdam)
- R. Palmer (Umeå)
D. N. Palmer (Canterbury, N.Z.)

EDITORIAL ADVISORY PANEL (continued)

- F. Palmieri (Bari)
K. Pantopoulos (Montreal)
A. G. Papavassiliou (Athens)
M. Pastor-Anglada (Barcelona)
B. Payrastré (Toulouse)
J. D. Pearson (London)
D. Pei (Minneapolis)
T. M. Penning (Philadelphia)
S. Pervaiz (Singapore)
J. M. Pfeilschifter (Frankfurt)
T. Pihlajaniemi (Oulu)
T. S. Pillay (Nottingham)
J. Pines (Cambridge)
T. J. T. Pinheiro (Warwick)
B. V. Polevoda (Rochester, NY)
V. Ponnambalam (Leeds)
M. Poolman (Oxford)
R. Y. Poon (Hong Kong)
F. Possmayer (London, Ont.)
D. Poyner (Birmingham)
N. C. Price (Glasgow)
C. G. Print (Auckland)
I. Prior (Liverpool)
C. A. Pritchard (Leicester)
D. Prockop (New Orleans)
M. Puceat (Montpellier)
M. Pusch (Genova)
S. Pyne (Glasgow)
- B. Qualmann (Magdeburg)
- C. Rabouille (Edinburgh)
Z. Radić (La Jolla)
S. Rahman (London)
D. P. Ramji (Cardiff)
M. Rattray (London)
E. L. Raven (Leicester)
J. A. Raven (Dundee)
F. X. Real (Barcelona)
B. Reaves (Bath)
S. Rebuffat (Paris)
C. P. F. Redfern (Newcastle upon Tyne)
R. J. Reece (Manchester)
B. H. A. Rehm (Palmerston North)
G. A. Reid (Edinburgh)
- P. S. Rennie (Vancouver)
I. Richard (Evry)
C. C. Rider (Egham)
M. H. Rider (Brussels)
D. J. Riese (West Lafayette, IN)
K. Rittinger (London)
J. D. Robertson (Kansas City)
N. J. Robinson (Newcastle)
H. L. Roderick (Cambridge)
L. Rönnstrand (Malmö)
G. Rotilio (Rome)
- J.-M. Sabatier (Marseille)
D. B. Sacks (Boston, MA)
P. Saftig (Kiel)
J. P. Salier (Rouen)
C. M. Sanderson (Cambridge)
M. F. G. Schmidt (Berlin)
M. L. Schmitz (Giessen)
L. Schomburg (Berlin)
N. S. Scrutton (Leicester)
A. W. Segal (London)
J. K. Sethi (Cambridge)
Y. Shai (Rehovot)
L. M. Shantz (Hershey, PA)
S. B. Shears (Research Triangle Park, NC)
D. Sheehan (Cork)
T. Shimizu (Aoba-ku)
Y. Shimomura (Nagoya)
P. Shore (Manchester)
K. Siddle (Cambridge)
L. Sistonen (Turku)
F. M. Sladek (Riverside, CA)
A. G. Smith (Leicester)
D. M. Smith (Macclesfield)
M. Soberon (Cuernavaca)
M. Solioz (Bern)
S. Souchelnytskyi (Uppsala)
S. Spadari (Pavia)
J. Spencer (Bristol)
F. Spener (Graz)
C. Springer (Sutton)
M. J. R. Stark (Dundee)
H. Stennicke (Bagsvaerd)
W. Stöcker (Mainz)
A. Y. Strongin (La Jolla, CA)
- G. J. Strous (Utrecht)
T. W. Sturgill (Charlottesville)
K. E. Suckling (Stevenage)
A. Suroliá (Bangalore)
C. Sutherland (Dundee)
B. Svensson (Kngs. Lyngby)
- L. J. Takemoto (Manhattan, KS)
T. Takenawa (Tokyo)
K. M. Taylor (Cardiff)
M. E. Taylor (London)
A. Tepikin (Liverpool)
M. Thelen (Bellinzona)
C. Thiel (Homburg)
M. S. Thomas (Sheffield)
N. S. B. Thomas (London)
D. Thornton (Manchester)
C. Tickle (Dundee)
T. Toda (London)
P. J. Tonge (Stony Brook)
K. Török (London)
J. Tovar-Torres (Egham)
P. Trayhurn (Liverpool)
G. C. Tsokos (Silver Spring, MD)
J. E. Turnbull (Liverpool)
B. M. Turner (Birmingham)
- B. Ullman (Portland, OR)
H. D. Ulrich (South Mimms)
S. Urbé (Liverpool)
- J. van Hellemond (Utrecht)
E. Van Schaftingen (Brussels)
A. Varadi (Budapest)
N. C. Veitch (Kew)
K. Venkateswarlu (Bristol)
G. Verhoeven (Leuven)
H. Vidal (Lyon)
J. H. Viles (London)
F. Villarroya (Barcelona)
J. F. G. Vliegthart (Utrecht)
H. Vogel (Calgary)
D. Vyoral (Prague)
- M. C. Wahl (Göttingen)
- M. J. Warren (London)
N. J. Watmough (Norwich)
S. P. Watson (Birmingham)
A. Watts (Oxford)
D. J. Waxman (Boston)
G. Werner-Felmayer (Innsbruck)
R. E. Wettenhall (Parkville)
M. Wheatley (Birmingham)
C. Wheeler-Jones (London)
P. J. White (Warwick)
J. Whitehead (Brisbane)
D. G. Wilkinson (London)
I. Wilson (Wien)
S. A. Wilson (Sheffield)
J.-O. Winberg (Trondheim)
S. J. Winder (Sheffield)
S. G. Withers (Vancouver)
R. Wojcikiewicz (Syracuse, NY)
P. Wojtaszek (Poznan)
S. Wolf (Jena)
J. M. Woof (Dundee)
M. C. Wright (Newcastle)
S. Wright (Leeds)
F. Wuytack (Leuven)
- F. Xu (Davis, CA)
- H. Yagisawa (Hyogo-ken)
T. Yamaya (Sendai)
H. Yang (Singapore)
J. Ye (Sydney)
P. Yen (Taipei)
J. Yim (Seoul)
I. S. Young (Belfast)
L. S. Young (Birmingham)
S. P. Young (Birmingham)
D. I. Yule (Rochester, NY)
- I. Zachary (London)
R. Zamojska (London)
J. M. Zapata (La Jolla)
J. Zhang (Warwick)
Z. Zhang (Hunan)
M. Zhao (Aberdeen)
X.-L. Zheng (Calgary)
M. Ziegler (Bergen)

Index of Authors

	PAGE		PAGE		PAGE		PAGE
Abdelraheim, S. R.	533	Enz, R.	429	Liu, M.-C.	497	Song, T.	391
Affourtit, C.	459	Etkin, L. D.	521	Lo, L.-C.	551	Stratford, F. L. L.	581
Agüero, F.	399			Lu, D.	559	Sugimoto, K.	391
		Ferrier, B.	465			Surolia, A.	411
Baverel, G.	465	Firtel, R. A.	377	Ma, J.	515	Surolia, N.	411
Bear, C. E.	581			Mancuso, C.	465	Swanton, E.	607
Becker, C.-M.	429	Hai, T.	559	Martin, G.	465		
Boghossian, M.	465	Hatano, N.	391	Martin, M.	465	Tanaka, K.	515
Bögler, O.	521	High, S.	607	Matsuo, M.	597	Thackray, A. M.	475
Brandt-Bohne, U.	447	Hong, M.	515	McNiven, T. N.	587	Thompsett, A. R.	533
Brazier, M. W.	533	Hopkins, L.	475	Mercer, J. F. B.	569	Tokuda, M.	391
Brown, D. R.	533	Huan, L.-J.	581	Mizutani, A.	391	Toms, H.	533
Budde, M.	541	Hung, Y. H.	569	Moore, A. L.	459		
Bujdoso, R.	475			Nazaret, R.	465	Ueda, K.	597
Bunning, S.	607	Idell, S.	497	Nelson, B.	505	Ulrich, M.	429
		Ihara, H.	391	Niemirowicz, G.	399		
		IJlst, L.	365	O'Farrell, P. A.	421	van Blitterswijk, W. J.	541
Caan, W.	541			O'Sullivan, D. B. D.	533	van der Luit, A. H.	541
Callan, A. C.	607	Jones, C. E.	533			van Roermund, C. W. T.	365
Camakaris, J.	569	Jones, O. T.	607	Pan, S.	521	Verheij, M.	541
Cazzulo, J. J.	399	Joshua-Tor, L.	421	Pan, Z.	515	Viles, J. H.	533
Chang, M. D.-T.	551			Parussini, F.	399	Visser, W. F.	365
Charest, P. G.	377	Kambe, T.	391	Ramakrishna, T.	437	Voskoboinik, I.	569
Chen, C.-T.	551	Katanaev, V. L.	485	Raman, B.	437		
Chen, J.	559	Kato, H.	597	Ramjeesingh, M.	581	Wan, C.-F.	551
Chen, W.-H.	551	Keene, D. R.	447	Ramya, T. N. C.	411	Wanders, R. J. A.	365
Cheung, J. C.	581	Kimura, Y.	597	Rao, Ch. M.	437	Watanabe, Y.	391
Chornomorets, M.	485	Kioka, N.	597	Rees, M. D.	587	Waterham, H. R.	365
Chowdary, T. K.	437	Klarenbeek, J. B.	541	Saadé, F.	465	White, F. A.	447
Clark, R. B.	521	Kobayashi, R.	521	Sahni, J.	505	Wu, C.	521
Conjard, A.	465	Koch, M.	447	Scharenberg, A. M.	505		
Crichton, P. G.	459	Kuang, J.	521	Seeber, S.	429	Yamaguchi, F.	391
		Kume, K.	391			Yasuda, S.	497
Davies, M. J.	587					You, G.	515
DeJournett, R. E.	521	Layton, M. J.	569			Zerp, S.	541
Durozard, D.	465	Li, Y.-K.	551				