

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** • Glasgow**D. Hoekstra** • Groningen**S. Huber** • Urbana, IL**J. Ladbury** • Houston, TX**M. A. Lemmon** • Philadelphia, PA**C. MacKintosh** • Dundee**K. H. Mayo** • Minneapolis, MN**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

Publisher

P. J. Starley

Executive Editor

M. R. Thorne

Production Manager

M. D. Cunningham

Staff Editors

L. Ball**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)
 J. M. Backer (Bronx, NY)
 B. M. Baker (Notre Dame, IN)
 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)
 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)
 A. Imbert (Grenoble)
 D. A. Jans (Monash)
 P.-S. Jayaraman (Birmingham)
 D. Jordan (Peoria, IL)
 M. G. Kazanietz (Philadelphia, PA)
 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)
 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 (Vari)
 S. Patel (London)
 G. Pavitt (Manchester)
 N. D. Perkins (Bristol)
 L. Persson (Lund)
 P. F. Pilch (Boston, MA)
 W. C. Plaxton (Kingston, Ont.)
 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)
 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)
 M. F. White (St Andrews)
 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 Beales, Newcastle University.

Instructions to Authors

● 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 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 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 *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\$3922	£1934	€3373
Online only	US\$3531	£1786	€3036
Single issues (print only)	US\$180.50	£91	€155

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).

Reviews

Bone morphogenetic protein and growth differentiation factor cytokine families and their protein antagonists

Published on the Internet 14 June 2010,
doi:10.1042/BJ20100305

C.C. Rider and B. Mulloy



1–12

Functional implications of sterol transport by the oxysterol-binding protein gene family

Published on the Internet 14 June 2010,
doi:10.1042/BJ20100263

M.H. Ngo, T.R. Colbourne and N.D. Ridgway



13–24

Research Papers

Contribution of DEAH-box protein DHX16 in human pre-mRNA splicing

Published as BJ Immediate Publication 28 April 2010,
doi:10.1042/BJ20100266

M. Gencheva, M. Kato, A.N.S. Newo and R.-J. Lin



25–32

SnoRNA microarray analysis reveals changes in H/ACA and C/D RNA levels caused by dyskerin ablation in mouse liver

Published as BJ Immediate Publication 28 April 2010,
doi:10.1042/BJ20091898

J. Ge, S.D. Crosby, M.E. Heinz, M. Bessler and P.J. Mason



33–41

Selenium controls the sex-specific immune response and selenoprotein expression during the acute-phase response in mice

Published as BJ Immediate Publication 6 April 2010,
doi:10.1042/BJ20091868

M. Stoedter, K. Renko, A. Högl and L. Schomburg



43–51

Roles of COMM-domain-containing 1 in stability and recruitment of the copper-transporting ATPase in a mouse hepatoma cell line

Published as BJ Immediate Publication 30 April 2010,
doi:10.1042/BJ20100223

T. Miyayama, D. Hiraoka, F. Kawaji, E. Nakamura, N. Suzuki and Y. Ogra

53–61

The arginylation-dependent association of calreticulin with stress granules is regulated by calcium

Published as BJ Immediate Publication 27 April 2010,
doi:10.1042/BJ20091953

M.A. Carpio, C. López Sambrooks, E.S. Durand and M.E. Hallak

63–72

Regulation of *Nicotiana tabacum* osmotic stress-activated protein kinase and its cellular partner GAPDH by nitric oxide in response to salinity

Published as BJ Immediate Publication 16 April 2010,
doi:10.1042/BJ20100492

I. Wawer, M. Bucholc, J. Astier, A. Anielska-Mazur, J. Dahan, A. Kulik, A. Wysłouch-Cieszynska, M. Zaręba-Koziół, E. Krzywinska, M. Dadlez, G. Dobrowolska and D. Wendehenne

73–83

Selenium compounds are substrates for glutaredoxins: a novel pathway for selenium metabolism and a potential mechanism for selenium-mediated cytotoxicity

Published as BJ Immediate Publication 22 April 2010,
doi:10.1042/BJ20100368

M. Wallenberg, E. Olm, C. Hebert, M. Björnstedt and A.P. Fernandes

85–93

SUMO modification regulates the transcriptional activity of XBP1

Published as BJ Immediate Publication 22 April 2010,
doi:10.1042/BJ20100193

H. Chen and L. Qi



95–102

Contents

Crystal structure and functional characterization of an immunomodulatory salivary cystatin from the soft tick <i>Ornithodoros moubata</i> <i>Published on the Internet 14 June 2010,</i> <i>doi:10.1042/BJ20100280</i>	J. Salát, G.C. Paesen, P. Řezáčová, M. Kotsyfakis, Z. Kovářová, M. Šanda, J. Majtán, L. Grunclová, H. Horká, J.F. Andersen, J. Brynda, M. Horn, M.A. Nunn, P. Kopáček, J. Kopecký and M. Mareš	 103–112
Oligomeric assembly and interactions within the human RuvB-like RuvBL1 and RuvBL2 complexes <i>Published as BJ Immediate Publication 22 April 2010,</i> <i>doi:10.1042/BJ20100489</i>	A. Niewiarowski, A.S. Bradley, J. Gor, A.R. McKay, S.J. Perkins and I.R. Tsaneva	113–125
Regulation of LIM-domain-binding 1 protein expression by ubiquitination of Lys ¹³⁴ <i>Published as BJ Immediate Publication 28 April 2010,</i> <i>doi:10.1042/BJ20091461</i>	P.W. Howard, S.F. Jue, D.G. Ransom and R.A. Maurer	127–136
TGF β (transforming growth factor β) receptor type III directs clathrin-mediated endocytosis of TGF β receptor types I and II <i>Published as BJ Immediate Publication 20 April 2010,</i> <i>doi:10.1042/BJ20091598</i>	S. McLean and G.M. Di Guglielmo	 137–145
Dominant-negative VDAC1 mutants reveal oligomeric VDAC1 to be the active unit in mitochondria-mediated apoptosis <i>Published as BJ Immediate Publication 26 April 2010,</i> <i>doi:10.1042/BJ20091338</i>	A. Mader, S. Abu-Hamad, N. Arbel, M. Gutierrez-Asuilar and V. Shoshan-Barmatz	147–155
Human pancreas-specific protein disulfide-isomerase (PDIP) can function as a chaperone independently of its enzymatic activity by forming stable complexes with denatured substrate proteins <i>Published as BJ Immediate Publication 27 April 2010,</i> <i>doi:10.1042/BJ20091954</i>	X.-M. Fu and B.T. Zhu	 157–169
Identification of the structural motif responsible for trimeric assembly of the C-terminal regulatory domains of polycystin channels PKD2L1 and PKD2 <i>Published as BJ Immediate Publication 21 April 2010,</i> <i>doi:10.1042/BJ20091843</i>	K.L. Molland, A. Narayanan, J.W. Burgner II and D.A. Yernool	171–183
Transferrin-iron routing to the cytosol and mitochondria as studied by live and real-time fluorescence <i>Published as BJ Immediate Publication 21 April 2010,</i> <i>doi:10.1042/BJ20100213</i>	M. Shvartsman, E. Fibach and Z.I. Cabantchik	185–193
The reconstituted <i>Escherichia coli</i> MsbA protein displays lipid flippase activity <i>Published as BJ Immediate Publication 22 April 2010,</i> <i>doi:10.1042/BJ20100144</i>	P.D.W. Eckford and F.J. Sharom	 195–203
Pyruvate dehydrogenase kinase 1 controls mitochondrial metabolism and insulin secretion in INS-1 832/13 clonal β -cells <i>Published as BJ Immediate Publication 23 April 2010,</i> <i>doi:10.1042/BJ20100142</i>	U. Krus, O. Kotova, P. Spégel, E. Hallgard, V.V. Sharoyko, A. Vedin, T. Moritz, M.C. Sugden, T. Koeck and H. Mulder	 205–213
Temporal regulation of <i>Cat-1</i> (cationic amino acid transporter-1) gene transcription during endoplasmic reticulum stress <i>Published as BJ Immediate Publication 21 April 2010,</i> <i>doi:10.1042/BJ20100286</i>	C.C. Huang, Y. Li, A.B. Lopez, C.-M. Chiang, R.J. Kaufman, M.D. Snider and M. Hatzoglou	215–224

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** • Glasgow**D. Hoekstra** • Groningen**S. Huber** • Urbana, IL**J. Ladbury** • Houston, TX**M. A. Lemmon** • Philadelphia, PA**C. MacKintosh** • Dundee**K. H. Mayo** • Minneapolis, MN**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

Publisher

P. J. Starley

Executive Editor

M. R. Thorne

Production Manager

M. D. Cunningham

Staff Editors

L. Ball**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)
J. M. Backer (Bronx, NY)
B. M. Baker (Notre Dame, IN)
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)
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)
A. Imbert (Grenoble)
D. A. Jans (Monash)
P.-S. Jayaraman (Birmingham)
D. Jordan (Peoria, IL)
M. G. Kazanietz (Philadelphia, PA)
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)
I. Morgan (Glasgow)
A. J. Morris (Lexington, KY)
M. Muckenthaler (Heidelberg)
B. Mullooy (South Mimms)
A. W. Munro (Manchester)
G. Murphy (Cambridge)
H. Y. Naim (Hannover)
W. Ogawa (Kobe)
G. Panayotou (Vari)
S. Patel (London)
G. Pavitt (Manchester)
N. D. Perkins (Bristol)
L. Persson (Lund)
P. F. Pilch (Boston, MA)
W. C. Plaxton (Kingston, Ont.)
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)
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)
M. F. White (St Andrews)
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)

PORLAND PRESS Ltd

Third Floor, Charles Darwin House
12 Roger Street
London WC1N 2JL, U.K.



ISSN 0264-6021

Index of Authors

PAGE	PAGE	PAGE	PAGE
Abu-Hamad, S.	147	Gancheva, M.	25
Andersen, J. F.	103	Gor, J.	113
Anielska-Mazur, A.	73	Grunclová, L.	103
Arbel, N.	147	Gutierr-Asuilar, M.	147
Astier, J.	73	Hallak, M. E.	63
Bessler, M.	33	Hallgard, E.	205
Björnstedt, M.	85	Hatzoglou, M.	215
Bradley, A. S.	113	Hebert, C.	85
Brynda, J.	103	Heinz, M. E.	33
Bucholc, M.	73	Hiraoka, D.	53
Burgner II, J. W.	171	Hög, A.	43
Cabantchik, Z. I.	185	Horká, H.	103
Carpio, M. A.	63	Horn, M.	103
Chen, H.	95	Howard, P. W.	127
Chiang, C.-M.	215	Huang, C. C.	215
Colbourne, T. R.	13	Jue, S. F.	127
Crosby, S. D.	33	Kato, M.	25
Dadlez, M.	73	Kaufman, R. J.	215
Dahan, J.	73	Kawaji, F.	53
Di Guglielmo, G. M.	137	Koeck, T.	205
Dobrowolska, G.	73	Kopáček, P.	103
Durand, E. S.	63	Kopecký, J.	103
Eckford, P. D. W.	195	Kotova, O.	205
Fernandes, A. P.	85	Kotsyfakis, M.	103
Fibach, E.	185	Kovářová, Z.	103
Fu, X.-M.	157	Krus, U.	205
Ge, J.	33	Krzywinska, E.	73
		Kulik, A.	73
		Li, Y.	215
		Lin, R.-J.	25
		Lopez, A. B.	215
		López Sambrooks, C.	63
		Mader, A.	147
		Majtán, J.	103
		Mareš, M.	103
		Mason, P. J.	33
		Maurer, R. A.	127
		McKay, A. R.	113
		McLean, S.	137
		Miyayama, T.	53
		Molland, K. L.	171
		Moritz, T.	205
		Mulder, H.	205
		Mulloy, B.	1
		Nakamura, E.	53
		Narayanan, A.	171
		Newo, A. N. S.	25
		Ngo, M. H.	13
		Niewiarowski, A.	113
		Nunn, M. A.	103
		Ogra, Y.	53
		Olm, E.	85
		Paesen, G. C.	103
		Perkins, S. J.	113
		Qi, L.	95
		Ransom, D. G.	127
		Renko, K.	43
		Řezáčová, P.	103
		Rider, C. C.	1
		Ridgway, N. D.	13
		Salát, J.	103
		Šanda, M.	103
		Schomburg, L.	43
		Sharom, F. J.	195
		Sharoyko, V. V.	205
		Shoshan-Barmatz, V.	147
		Shvartsman, M.	185
		Snider, M. D.	215
		Spégel, P.	205
		Stoedter, M.	43
		Sugden, M. C.	205
		Suzuki, N.	53
		Tsaneva, I. R.	113
		Vedin, A.	205
		Wallenberg, M.	85
		Wawer, I.	73
		Wendehenne, D.	73
		Wystouch-Cieszynska, A.	73
		Yernool, D. A.	171
		Zaręba-Kozioł, M.	73
		Zhu, B. T.	157