

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

Reviews Editor

G. Salvesen • La Jolla, CA

Deputy Chairs

J. F. Cáceres • Edinburgh**D. Carling** • London**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** • Bristol**M. A. Schwartz** • New Haven, CT**D. Tosh** • Bath**D. M. F. van Aalten** • Dundee**B. Vanhaesebrouck** • London**H. M. Wallace** • Aberdeen**M. F. White** • St Andrews**A. Xu** • Hong Kong

Publisher

P. J. Starley

Executive Editor

M. R. Thorne

Head of Production

M. D. Cunningham

Production Editor

E. A. G. Elloway

Staff Editors

C. L. Curtis**H. F. Logan****J. W. Mockridge****P. D. Taylor**

Desk Editor

A. Ho

Administrative Editor, US Office

S. Schendel

Administrative Editor, China Office

L. Huo

S. M. Assmann (University Park, PA)

T. K. Attwood (Manchester)

J. M. Backer (Bronx, NY)

B. M. Baker (Notre Dame, IN)

J. E. Bear (Chapel Hill, NC)

J. L. Blank (Cambridge, MA)

M. A. Bogoyevitch (Melbourne)

L. H. Boise (Atlanta, GA)

J. Bolaños (Salamanca)

A. Bowie (Dublin)

S. Bröer (Canberra)

P. S. Brookes (Rochester, NY)

N. J. Buckley (London)

D. Burger (Geneva)

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

Y.-G. Chen (Beijing)

L. Chernomordik (Bethesda, MD)

A. C. Clark (Raleigh, NC)

V. Darley-Ussmar (Birmingham, AL)

M. J. Davies (Sydney)

B. Davis (Oxford)

L. A. Devi (New York, NY)

C. Dickey (Tampa, FL)

I. Dikic (Frankfurt)

R. Docampo (Athens, GA)

A. F. Dulhunty (Canberra)

S. Flitsch (Manchester)

F. Foufelle (Paris)

B. Halliwell (Singapore)

J. A. Hardy (Amherst, MA)

P. Hawkins (Cambridge)

P. Hedden (Harpden)

J. M. Horowitz (Raleigh, NC)

E. Ikonen (Helsinki)

A. Imbert (Grenoble)

D. A. Jans (Monash)

P. A. Jeggo (Brighton)

J. Jez (St Louis, MO)

M. G. Kazanietz (Philadelphia, PA)

S. Kim (Seoul)

Z. Knight (New York, NY)

D. Komander (Cambridge)

D. W. Laird (London, ON)

J. Leiper (London)

S. Ley (London)

K. Lingelbach (Marburg)

M. Lowe (Manchester)

K. Lynch (Philadelphia, PA)

S. Mayor (Bangalore)

N. Q. McDonald (London)

M. McManus (Palmerston North)

G. Melino (Leicester)

T. Miller (Norwich)

E. T. Morgan (Atlanta, GA)

S. J. Morley (Brighton)

M. Muckenthaler (Heidelberg)

B. Mulloy (South Mimms)

A. W. Munro (Manchester)

G. Murphy (Cambridge)

H. Y. Naim (Hannover)

J. H. Naismith (St Andrews)

A. R. Nebreda (Barcelona)

W. Ogawa (Kobe)

M. Okada (Osaka)

G. Panayotou (Vari)

D. Pei (Columbus, OH)

P. F. Pilch (Boston, MA)

W. C. Plaxton (Kingston, ON)

S. Ponnambalam (Leeds)

R. Y. Poon (Hong Kong)

B. V. L. Potter (Bath)

C. G. Proud (Southampton)

Z. Radić (La Jolla, CA)

K. Rittinger (London)

M. F. Roberts (Boston, MA)

K. Sakamoto (Lausanne)

J. M. Sanchez-Ruiz (Granada)

F. Sargent (Dundee)

R. Sasisekharan (Cambridge, MA)

N. Savery (Bristol)

J. R. Sayers (Sheffield)

K. Schumacher (Heidelberg)

P. T. Schumacker (Chicago, IL)

L. C. Serpell (Brighton)

F. J. Sharom (Guelph, ON)

R. J. Shaw (La Jolla, CA)

H. Shimano (Tsukuba City)

J. Slack (Minneapolis, MN)

S. Spiegel (Richmond, VA)

W. M. Stark (Glasgow)

G. R. Steinberg (Hamilton, ON)

H. Stenmark (Oslo)

S. Teichmann (Cambridge)

V. Tergaonkar (Singapore)

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

C. Tournier (Manchester)

M. Uesugi (Kyoto)

H. D. Ulrich (Mainz)

S. Urbé (Liverpool)

H. J. Vogel (Calgary, AB)

M.-W. Wang (Shanghai)

S. Whitney (Canberra)

D. Wu (Guangzhou)

H.-W. Xue (Shanghai)

I. Zachary (London)

C. Zurzolo (Paris)



- Journal compilation © 2014 Biochemical Society
- The *Biochemical Journal* (ISSN 0264-6021 for print/online journal; ISSN 1470-8728 for online only journal) is published and distributed by Portland Press Limited on behalf of the Biochemical Society (the owner), and appears twice monthly (24 issues).
- **Editorial and publishing offices:** *Biochemical Journal*, Portland Press Limited, Third Floor, Charles Darwin House, 12 Roger Street, London WC1N 2JU, U.K.
- **US agent:** c/o Air Business Ltd, c/o Worldnet Shipping Inc., 156–15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, U.S.A.
- **Subscriptions department:** Portland Customer Services, Third Floor, Charles Darwin House, 12 Roger Street, London WC1N 2JU, 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 0264-6021/2014/\$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 Jamaica, NY 11431
- **Postmaster:** send address corrections to *Biochemical Journal*, c/o Air Business Ltd, c/o Worldnet Shipping Inc., 156–15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, U.S.A.
- **Cover design:** Angie Moyes (www.fuz.co.uk).
- **Cover image credits:** M. Sharon Stack, University of Missouri; Carmen A. Mannella, Research and Technology Wadsworth Center, Albany, NY; Department of Microbiology, University of Leeds; Jan A. Miernyk, University of Missouri; G. P. Côté, Kingston, Ont.; G. Salvesen, La Jolla; Dr Gordon Beakes, 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 knowledge in these fields. Papers may include new results obtained experimentally, descriptions of new experimental methods of biochemical importance, or new interpretations of existing results. Novel theoretical contributions will be considered, although these papers should also contain some experimental testing of the theory. All work presented should have as its aim the development of biochemical concepts rather than the mere recording of facts. Preliminary, confirmatory or inconclusive work will not be published. The *Biochemical Journal* will not publish material that has been wholly or largely published elsewhere, even as a preliminary communication or in refereed 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 PubMed.

● Open access option – Opt2Pay Choose to make your paper open access. For more information see www.biochemj.org.

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

● Colour figures Colour figures are published free of charge provided that the corresponding author on the published paper has been a Full or Early Career member of the Biochemical Society for at least 2 years and that the use of colour is deemed scientifically necessary by the reviewers. Otherwise the charge is £300 to cover all colour figures in the paper.

● 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 2014 volumes 457–464 (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, PubMed and Science Citation Index.

● Subscription rates Institutional subscription rates for 2014 are shown below. Subscribers to the *Biochemical Journal* can subscribe additionally to *Biochemical Society Transactions* on a joint subscription at a reduced rate (see www.portlandpress.com for further details). Terms are cash with order (US\$ in N. America, £ sterling for rest of the world, or US\$ equivalent at current rate of exchange; subscribers in the EU may

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

	N. America	Rest of world	Euro price
One year (8 vols) Print and online	US\$5590	£3140	€4710
Online only	US\$4470	£2510	€3770
Single issues (print only)	US\$246	£150	€183

Overseas rates include airfreight delivery. Airspeeded delivery is available at an additional cost of £112.35/\$199/€168.

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
Third Floor, Charles Darwin House,
12 Roger Street, London WC1N 2JU, U.K.
(telephone 020 76852444; fax 020 76852468;
email sales@portland-services.com).

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

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

Review**RBR E3 ubiquitin ligases: new structures, new insights, new questions**

Published on the Internet 28 February 2014,
doi:10.1042/BJ20140006

D.E. Spratt, H. Walden and G.S. Shaw

421–437

Online Commentary

TIGAR's promiscuity

Published on the Internet 28 February 2014,
doi:10.1042/BJ20140087
(see accompanying paper, pp. 439–448)

J.P. Bolaños

e5–e7

Research Papers

Identification of TP53-induced glycolysis and apoptosis regulator (TIGAR) as the phosphoglycolate-independent

2,3-bisphosphoglycerate phosphatase

Published as BJ Immediate Publication 15 January 2014,
doi:10.1042/BJ20130841

How the structure of the large subunit controls function in an oxygen-tolerant [NiFe]-hydrogenase

Published as BJ Immediate Publication 16 January 2014,
doi:10.1042/BJ20131520

The Cdc48–Vms1 complex maintains 26S proteasome architecture

Published as BJ Immediate Publication 19 December 2013,
doi:10.1042/BJ20131161

CREB phosphorylation at Ser¹³³ regulates transcription via distinct mechanisms downstream of cAMP and MAPK signalling

Published as BJ Immediate Publication 8 January 2014,
doi:10.1042/BJ20131115

Novel evidence for the specific interaction between cholesterol and α -haemolysin of *Escherichia coli*

Published as BJ Immediate Publication 19 December 2013,
doi:10.1042/BJ20131432

Insulin-stimulated leptin secretion requires calcium and PI3K/Akt activation

Published as BJ Immediate Publication 10 January 2014,
doi:10.1042/BJ20131176

Structural and functional characterization of NanU, a novel high-affinity sialic acid-inducible binding protein of oral and gut-dwelling Bacteroidetes species

Published as BJ Immediate Publication 19 December 2013,
doi:10.1042/BJ20131415

A dual-targeted aminoacyl-tRNA synthetase in *Plasmodium falciparum* charges cytosolic and apicoplast tRNA^{Cys}

Published as BJ Immediate Publication 16 January 2014,
doi:10.1042/BJ20131451

I. Gerin, G. Noël, J. Bolsée, O. Haumont,
E. Van Schaftingen and G.T. Bommer

439–448

L. Bowman, L. Flanagan, P.K. Fyfe, A. Parkin, W.N. Hunter
and F. Sargent

449–458

J.R. Tran and J.L. Brodsky

459–467



S. Naqvi, K.J. Martin and J.S.C. Arthur

469–479

R.F. Vazquez, S.M. Maté, L.S. Bakás, M.M. Fernández,
E.L. Malchiodi and V.S. Herlax

481–489



Y. Wang, Y. Ali, C.-Y. Lim, W. Hong, Z.P. Pang and W. Han

491–498

C. Phansopa, S. Roy, J.B. Rafferty, C.W.I. Douglas,
J. Pandhal, P.C. Wright, D.J. Kelly and G.P. Stafford

499–511

J.S. Pham, R. Sakaguchi, L.M. Yeoh, N.S. De Silva,
G.I. McFadden, Y.-M. Hou and S.A. Ralph

513–523



Contents

Structural basis of conformational transitions in the active site and 80's loop in the FK506-binding protein FKBP12 <i>Published as BJ Immediate Publication</i> 10 January 2014, doi:10.1042/BJ20131429	S.M. Mustafi, M. Brecher, J. Zhang, H. Li, D.M. Lemaster and G. Hernández	525–536
The ability of TRIM3 to induce growth arrest depends on RING-dependent E3 ligase activity <i>Published as BJ Immediate Publication</i> 6 January 2014, doi:10.1042/BJ20131288	R. Raheja, Y. Liu, E. Hukkelhoven, N. Yeh and A. Koff	537–545
Mechanistic insight into the reaction catalysed by bacterial type II dehydroquinases <i>Published as BJ Immediate Publication</i> 7 January 2014, doi:10.1042/BJ20131103	C. Coderch, E. Lence, A. Peón, H. Lamb, A.R. Hawkins, F. Gago and C. González-Bello	547–557
The WNK-regulated SPAK/OSR1 kinases directly phosphorylate and inhibit the K ⁺ –Cl [−] co-transporters <i>Published as BJ Immediate Publication</i> 7 January 2014, doi:10.1042/BJ20131478	P. de los Heros, D.R. Alessi, R. Gourlay, D.G. Campbell, M. Deak, T.J. Macartney, K.T. Kahle and J. Zhang	559–573
Effects of alternative splicing on the function of bestrophin-1 calcium-activated chloride channels <i>Published as BJ Immediate Publication</i> 17 December 2013, doi:10.1042/BJ20121546	Y.-H. Kuo, I.F. Abdullaev, M.C. Hyzinski-García and A.A. Mongin	575–583

Index of Authors

	PAGE		PAGE		PAGE		PAGE
Abdullaev, I. F.	575	Gago, F.	547	Li, H.	525	Ralph, S. A.	513
Alessi, D. R.	559	Gerin, I.	439	Lim, C.-Y.	491	Roy, S.	499
Ali, Y.	491	González-Bello, C.	547	Liu, Y.	537		
Arthur, J. S. C.	469	Gourlay, R.	559	Macartney, T. J.	559	Sakaguchi, R.	513
Bakás, L. S.	481	Han, W.	491	Malchioldi, E. L.	481	Sargent, F.	449
Bolaños, J. P.	e5	Haumont, O.	439	Martin, K. J.	469	Shaw, G. S.	421
Bolsée, J.	439	Hawkins, A. R.	547	Maté, S. M.	481	Spratt, D. E.	421
Bommer, G. T.	439	Herlax, V. S.	481	McFadden, G. I.	513	Stafford, G. P.	499
Bowman, L.	449	Hernández, G.	525	Mongin, A. A.	575		
Brecher, M.	525	Hong, W.	491	Mustafi, S. M.	525	Tran, J. R.	459
Brodsky, J. L.	459	Hou, Y.-M.	513				
Campbell, D. G.	559	Hukkelhoven, E.	537	Naqvi, S.	469	Van Schaftingen, E.	439
Coderch, C.	547	Hunter, W. N.	449	Noël, G.	439	Vazquez, R. F.	481
		Hyzinski-García, M. C.	575	Pandhal, J.	499	Walden, H.	421
Deak, M.	559	Kahle, K. T.	559	Pang, Z. P.	491	Wang, Y.	491
De Los Heros, P.	559	Kelly, D. J.	499	Parkin, A.	449	Wright, P. C.	499
De Silva, N. S.	513	Koff, A.	537	Peón, A.	547		
Douglas, C. W. I.	499	Kuo, Y.-H.	575	Pham, J. S.	513	Yeh, N.	537
Fernández, M. M.	481	Lamb, H.	547	Phansopa, C.	499	Yeoh, L. M.	513
Flanagan, L.	449	Lemaster, D. M.	525	Rafferty, J. B.	499	Zhang, Jing	525
Fyfe, P. K.	449	Lence, E.	547	Raheja, R.	537	Zhang, Jinwei	559

Index of Authors

Volume 458, 2014

PAGE	PAGE	PAGE
Abdullaev, I. F.	575	Fyfe, P. K.
Abell, C.	387	
Alessi, D. R.	41, 559	Gadadhar, S.
Ali, Y.	491	Gago, F.
Alvarez, J.	33	Galindo, C. L.
Alvarez-Laviada, A.	365	Geerts, D.
Alzari, P. M.	419	Gerin, I.
Andrés, E.	355	Gonatopoulos-Pournatzis, T.
Argundez, H.	355	González-Bello, C.
Arluiso, V.	11	González-Ramos, S.
Arthur, J. S. C.	469	Gourlay, R.
Babon, J. J.	395	Grosje, R.
Bai, D.	1	
Bairwa, G.	323	Haitz, K.
Bakás, L. S.	481	Hammaren, H.
Bamba, T.	81	Han, W.
Bañó, M. C.	239	Hanke, D. E.
Barilone, N.	419	Hao, J.
Bastide, A.	213	Hare, L. M.
Bella, J.	301	Härtmann, R. K.
Bellinzoni, M.	419	Hasan, A.
Bencini, C.	407	Hasler, M.
Benini, F.	407	Haumont, O.
Blundell, T. L.	387	Hawkins, A. R.
Büнемann, M.	131	Hayakawa, Y.
Bodmann, E.-L.	131	Heath, J. K.
Bolahos, J. P.	e5	Hengrung, N.
Bolsée, J.	439	Herlax, V. S.
Bommer, G. T.	439	Hernández, G.
Bora, N.	375	Hershey, J. W. B.
Boscá, L.	187	Higashi, N.
Bowman, L.	449	Hill, A. T.
Boyes, J.	153	Hoang, V.
Brandt, D.	131	Hoch, P. G.
Brecher, M.	525	Hong, W.
Brodsky, J. L.	459	Hou, Y.-M.
Bromley, J. R.	225	Houde, V. P.
Campbell, D. G.	559	Hukkelhoven, E.
Carden, M. J.	213	Hunter, W. N.
Chang, J.-j.	159	Hyzinski-García, M. C.
Chen, F.	95	
Chen, J.	171	Igual, J. C.
Chen, T.	95	Imamoto, F.
Chiesa, R.	365	Irimura, T.
Chigri, F.	313	Iwasaki, K.
Chiliveri, S. C.	119	
Coderch, C.	547	James, C. M.
Cole, S. T.	387	Jiang, N.
Coleman, S. M.	267	Josephs, T. M.
Cook, S. M.	23	Juanes, M. A.
Coslo, D. M.	95	
Cowling, V. H.	185	Kadurin, I.
Davies, P.	41	Kahle, K. T.
Day, C. L.	259	Kajiwara, K.
de la Fuente, S.	33	Kan, S.-h.
de los Heros, P.	559	Karande, A. A.
De Silva, N. S.	513	Kasaoka, T.
Deak, M.	559	Kaur, R.
Deshmukh, M. V.	119	Kinross, K. M.
Di Stefano, A.	281	Kirkham, C. M.
Diao, L.	159	Kitahara, A.
Dickson, P. I.	281	Knight, J. R. P.
Dolphin, A. C.	365	Kobayashi, R.
Douglas, C. W. I.	499	Koff, A.
Du, S.-c.	159	Kogane, Y.
Ernst, M.	251	Kubota, Y.
Fernández, M. M.	481	Kumar, G. K.
Fernández-Velasco, M.	187	Kuo, Y.-H.
Flanagan, L.	449	Kupinski, A. P.
Fonteriz, J.	33	Kuwabara, P. E.
Fothergill-Gilmore, L. A.	301	
Fukusaki, E.	81	Laktyushin, A.
		Lamb, H.
		Lau, A. F.
		Laurenzana, E. M.
	449	
	375	Rafferty, J. B.
	547	Raheja, R.
	57	Ralph, S. A.
	95	Ramsay, R. G.
	499	
	525	Rasheed, M.
	525	Rinne, A.
	547	Ritoro, M. S.
	547	Rocha, A. G.
	525	Roh, V.
	171	Roobol, A.
	395	Roobol, J.
	491	Rossi, D.
	537	Roy, S.
	407	Sahoo, R.
	395	Sakaguchi, R.
	203	Sakamoto, K.
	131	Sakisaka, T.
	159	Sanderson-Smith, M. L.
	559	Sargent, F.
	313	Sato, T.
	481	Sawyer, D. B.
	407	Scarella, A. M.
	469	Scott, J. N. F.
	239	Semenza, G. L.
	33	Senatore, A.
	195	Seya, T.
	481	Shaw, G. S.
	291	Shida, H.
	141	Shimamoto, S.
	203	Shimoda, L. A.
	41	Shapiro, N.
	313	Silvennoinen, O.
	343	Sinow, C. S.
	301	Skora, A.
	251	Sleeman, J. E.
	213	Smales, C. M.
	213	Smith, M. E.
	575	Song, L.
	407	Sorrentino, V.
	421	Spratt, D. E.
	313	Stael, S.
	499	Stafford, G. P.
	171	Su, R.
	57	Sue, M.
	291	Suematsu, M.
	387	Surade, S.
	11	Taghbalout, A.
	323	Taigwal, R.
	203	Takano, N.
	195	Tatematsu, M.
	313	Teige, M.
	225	Thomson, J. C. P.
	281	Tippin, B. L.
	375	Tiware, V.
	281	Todd, A. K.
	141	Tokumitsu, H.
	459	Tran, J. R.
	335	Tran, T.-L.
	281	Troitskaya, L. A.
	141	Tsuchiya, M.
	291	Tsunekawa, N.
	153	Tuma, R.
	225	Turnbull, C. G. N.
	387	Ty, N.
	395	Ungureanu, D.
	407	Van Schaftingen, E.
	355	Varghese, J.
	109	Varghese, L. N.
	203	Vazquez, R. F.
	267	Vothknecht, U. C.
	407	Wagner, T.
	343	Waki, M.
	421	Walden, H.
	23	Walker, M. J.
	301	Walkinshaw, M. D.
	1	Wang, A. H.
	171	Wang, F.

Volume Author Index (continued)

PAGE		PAGE		PAGE		PAGE
Wang, H.-j.	159	Wright, P. C.		Yamaguchi, F.	141	Yuan, M.
Wang, Y.	491			Yamamoto, Y.	69	
Wang, Y.-l.	159			Yang, Q.	11	
Waring, P. M.	251	Xu, F.		Yeh, N.	537	Zhang, Jin
Warnes, B. J.	225		159	Yeoh, L. M.	513	Zhang, Jing
Wieland, T.	131			Ying, S.	109	Zhang, Jinwei
Wilbanks, S. M.	259			Yoshida, A.	69	Zhang, J.-W.
Willis, A. E.	213	Yamada, T.		Young, S. N.	395	Zhong, W.
			81			301