

biochemical society  
**TRANSACTIONS**

**660th Meeting, Joint Congress with the British Society for Immunology, Harrogate**

sessions

**Plenary Sessions**

**Immunological Intervention Strategies in Allergy**

**Signalling and Cell Death**

**Trafficking**

**Signalling Processes in Haemopoietic Cells**

**Immunoglobulins and Mechanisms of Mucosal Immunity**

**Regulation of Transcription and Translation**

**Leucocyte/Stromal Cell Interactions in Inflammation**

**Gene Therapy**

**Lipids as Regulators of Cell Function**

**Modulators of Nuclear Receptor Function**

**Basic and Clinical Aspects of Autoimmunity**

**B- and T-Cell Signalling**

**The Molecular Biology of Antigens**

**Immune Properties of Central Nervous System Parenchymal Cells**

**The Biology of Natural Killer Cells and NK1.1<sup>+</sup> T-cells**

**Targeting Cytotoxic Immunotherapy**

**BSI Workshops**

communications

■ *Biochemical Society Transactions* (ISSN 0300-5127; USPS 003350) is published by Portland Press Ltd on behalf of the Biochemical Society. Each issue contains the lectures, colloquia and communications presented at a meeting of the Biochemical Society or one of its constituent interest groups and, occasionally, the colloquia of other scientific meetings of biochemical interest held in the U.K. or elsewhere. Submitted primary research papers are not published and authors are reminded that detailed presentation of new experimental data may prejudice its subsequent publication in precisely that same form elsewhere. Lectures and colloquium contributions are published subject to editorial acceptance and authors will be issued with instructions on the format of their article before the meeting. Authors intending to present communications at Society meetings should consult the instructions for authors which appear in the Society's membership journal, *The Biochemist*, and occasionally in this journal. Although the publication of colloquia is by invitation, organizers of scientific meetings who would be interested in publishing their colloquia presentations in the journal are invited to discuss this possibility with the Executive Editor in the first instance.

■ For information about the advantages of membership of the Biochemical Society, contact the Executive Secretary, The Biochemical Society, 59 Portland Place, London W1N 3AJ, U.K. (telephone 0171-580 5530).

■ Editorial and publishing office: *Biochemical Society Transactions*, 59 Portland Place, London W1N 3AJ, U.K. (telephone 0171-637 5873; facsimile 0171-323 1136; e-mail edit@portlandpress.co.uk).

■ Royal Mail International, c/o Yellowstone International, 87 Burlews Court, Hackensack, NJ 07061, U.S.A.

### Subscription rates

■ Subscriptions department: Portland Press, P.O. Box 32, Commerce Way, Colchester CO2 8HP, U.K. (telephone 01206-796351; facsimile 01206-799331; e-mail sales@portlandpress.co.uk). *Biochemical Society Transactions* is published in February, May, August and November of each year. Subscription rates for volume 25, parts 1-4 (1997):

	North America	Rest of world
Volume 25	\$264.00	£156.00
Single issues	\$70.00	£41.00

Subscribers to the *Biochemical Journal* may take a joint subscription to that journal and to *Biochemical Society Transactions*, saving \$25 (North America) or £15 (rest of world), or to *Biochemical Society Transactions* and *Biotechnology and Applied Biochemistry*, saving \$34 (North America) or £20 (rest of world). North American subscription rates include airfreight delivery, and those for Japan include Accelerated Surface Post; other overseas locations are serviced by surface mail. Air-speeded delivery is available at an extra cost of £11. Back issues are available.

■ 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 form 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 the 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 0300-5127/97/\$8.50+0.00. Inquiries concerning reproduction outside those terms should be sent to the publishers at the London 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 publisher nor the editor assume any responsibility for any errors or omissions herein contained.

■ Display advertising is accepted; information is available on request from the London office of Portland Press.

■ Second-class postage paid at South Hackensack, NJ, U.S.A.

■ U.S. Postmaster: send address changes to Royal Mail International, c/o Yellowstone International, 2375 Pratt Boulevard, Elk Grove Village, IL 60007-5937, U.S.A.

■ Typeset by Unicus Graphics Ltd, Horsham, and printed in Great Britain by Whitstable Litho Printers Ltd, Kent.

- Abdullah, N.** 267S  
**Abordo, E. A.** 250S  
**Ackerman, C.** 374  
**Adams, D. H.** 232S, 255S–257S, 271S  
**Adams, G. A.** 288S  
**Adams, P. W.** 733  
**Adcock, I. M.** 154S  
**Adorini, L.** 62S  
**Ager, A.** 260S, 261S, 421  
**Ahouse, J. C.** 481  
**Aitken, R.** 326S  
**Akbar, A. N.** 242S, 258S, 529  
**Alavi, A.** 313S  
**Alexander, D. R.** 302S, 445  
**Alexandroff, A. B.** 201S, 270S, 363S  
**Ali, S.** 195S  
**Allan, L. J.** 198S  
**Allen, A.** 325S, 372S, 486  
**Allen, J. M.** 215S, 254S, 361S  
**Almond, N. M.** 284S, 285S  
**Alpar, H. O.** 337S, 338S  
**Altmann, D.** 357S  
**Altmann, D. M.** 308S  
**Amlot, P.** 709  
**Amor, S.** 168S, 342S, 347S  
**Anderson, C. M.** 328S  
**Anderson, D.** 371  
**Anderson, D. R.** 705  
**Anderson, J.** 219S  
**Anderton, S. M.** 659  
**Andresen, L.** 220S  
**Angove, H.** 273S  
**Apperley, J.** 364S  
**Arrowsmith, M.** 369S  
**Arvieux, C.** 255S, 256S  
**Astley, S. B.** 206S  
**Atkin, J. D.** 323S  
**Atkinson, A. M.** 295S  
**Axford, J. S.** 313S  
**Axton, P. J.** 276S  
  
**Bacon, P. A.** 242S, 303S  
**Badley, R. A.** 160S, 161S  
**Bagaeva, L. V.** 163S  
**Bailey, A. L.** 206S  
**Bailey, J. M.** 247S  
**Baldwin, C. I.** 325S  
  
**Banati, R. B.** 683  
**Bancroft, G. J.** 276S, 287S  
**Banfic, H.** 571  
**Banin, S.** 648  
**Barbour, M. J.** 167S  
**Barker, R. N.** 312S  
**Barnes, P. J.** 154S  
**Barnfield, C. M.** 335S, 336S  
**Bassendine, M. F.** 374S  
**Batten, M. R.** 329S  
**Baum, H.** 636  
**Beard, M.** 374  
**Beavil, A. J.** 387  
**Beech, J.** 274S  
**Beeson, D.** 665  
**Begara-McGorum, I. M.** 279S  
**Begent, R. H. J.** 715  
**Begg, F.** 374  
**Behrendt, M.** 321S  
**Bell, M. C.** 218S  
**Bell, R. M.** 561  
**Bellamy, J.** 237S  
**Beltinger, C.** 405  
**Benedetti, A.** 183S, 524  
**Bennett, M.** 174S  
**Berengena, M.** 169S  
**Beverley, P. C. L.** 177S  
**Bhandari, S.** 193S  
**Bianchi, G.** 236S  
**Bibby, M. C.** 265S  
**Biron, C. A.** 687  
**Black, J.** 201S, 270S, 363S  
**Blainey, D. A.** 159S  
**Blair, G. E.** 165S, 209S, 352S, 353S  
**Blair, P. J.** 651  
**Blanch, V. J.** 475  
**Böhler, T.** 405  
**Bolger, G.** 374  
**Bollina, P.** 363S  
**Bolodeoku, J.** 356S  
**Bolton, C.** 166S, 167S  
**Bommer, U.-A.** 269S  
**Bond, A.** 665  
**Bonner, B. C.** 331S, 332S  
**Boon, T.** 544  
**Booth, C. G.** 295S  
**Borreiro, L. F.** 176S  
**Borthwick, N. J.** 258S  
**Boswell, C. M.** 278S  
**Boulougouris, G.** 305S  
**Bourke, S.** 325S  
  
**Boursier, L.** 324S  
**Bournsnell, M. E. G.** 200S  
**Bowen, G.** 204S  
**Bowen, J.** 337S  
**Boyle, D. J.** 317S  
**Boylston, A. W.** 314S  
**Braczkowski, R.** 164S  
**Brady, M.** 359S  
**Bramley, J. C.** 354S  
**Bramwell, H.** 311S  
**Bray, S. E.** 184S  
**Brew, R.** 264S  
**Brickell, P. M.** 648  
**Brock, J. H.** 193S, 315S, 317S  
**Broker, I.** 208S  
**Brooks, C. G.** 174S  
**Brosnan, C. F.** 679  
**Brown, K. L.** 173S, 307S  
**Brown, M. G.** 691  
**Brown, M. R. W.** 338S  
**Brown, W. L.** 158S  
**Bruce, L.** 245S  
**Bruce, M. E.** 173S, 307S  
**Bruce, M. G.** 340S  
**Bucala, R.** 520  
**Bulmer, J. N.** 294S  
**Bunn, J. E. G.** 317S  
**Bunone, G.** 597  
**Burchell, A.** 180S, 182S–184S  
**Burchell, B.** 181S, 182S  
**Burt, A. D.** 374S  
**Byth, K. F.** 302S, 445  
  
**Calder, P. C.** 350S, 351S  
**Callard, R. E.** 451  
**Calvert, J. E.** 325S  
**Cambier, J. C.** 441  
**Camon, E. B.** 291S  
**Campbell, I.** 340S, 361S  
**Campbell, J. D. M.** 277S  
**Campbell, L. E.** 416  
**Caraher, E. M.** 319S  
**Carroll, R. G.** 651  
**Casari, G.** 236S  
**Case, M.** 374S  
**Cason, J.** 281S  
**Castleden, S.** 717  
**Catchpole, B.** 238S  
**Cedillo-Barron, L.** 273S, 275S  
**Chambers, D. A.** 163S  
**Chambers, K. S.** 70S  
  
**Chambon, P.** 60S  
**Chaplin, P. J.** 291S  
**Chapman, K. E.** 235S, 583  
**Charyeva, I. G.** 162S  
**Cherry, R. J.** 358S, 360S  
**Chesney, J.** 520  
**Chester, K. A.** 71S  
**Chignell, A. H.** 234S  
**Childrestone, A.** 275S  
**Chilosi, M.** 524  
**Chilvers, E. R.** 244S, 245S  
**Chiron, M. F.** 709  
**Chiter, A.** 209S  
**Cho, S.-W.** 393  
**Chong, H.** 717  
**Christensen, P. U.** 224S  
**Christmas, S. E.** 264S  
**Churchman, M.** 356S  
**Cicitira, P. J.** 324S  
**Cieśła, K.** 164S  
**Claessens, F.** 186S  
**Clark, S. C.** 199S  
**Clarke, C. J.** 340S  
**Clerk, A.** 221S, 222S  
**Cohen, R. L.** 163S  
**Cohen, S. B. A.** 175S  
**Collier, J. D.** 359S  
**Collins, P.** 182S  
**Collins, R. A.** 291S  
**Conner, C. E.** 181S  
**Conrad, D. H.** 393  
**Conroy, L. A.** 445  
**Conway, A.-M.** 549  
**Conway, B. R.** 337S  
**Cook, A.** 273S, 275S  
**Cook, J. P. D.** 387  
**Corlett, L.** 66S  
**Corthésy, B.** 471  
**Cory, G. O. C.** 648  
**Cosman, D.** 371  
**Coulie, P. G.** 544  
**Cousin, J. M.** 243S, 246S  
**Craigmile, S. C. L.** 202S  
**Creminon, C.** 375S  
**Crook, B.** 159S  
**Crowley-Nowick, P. A.** 218S  
**Crowston, J. G.** 529  
**Culley, F. J.** 286S  
**Curi, R.** 249S, 344S, 345S  
**Curi, T. C. P.** 249S  
**Curran, A. D.** 198S  
**Cuzner, M. L.** 671

- da Costa, M. 344S  
 da Silva, A. J. 361  
 Dafoe, D. C. 288S  
 Dahl, M. 540  
 Dance, D. A. B. 287S  
 Daniels, R. H. 253S, 349S  
 Dark, J. H. 199S  
 Darrington, R. S. 292S  
 Davey, J. 224S–230S  
 Davies, A. 354S  
 Davies, E. L. 223S  
 Davies, H. 204S  
 Davies, M. 274S  
 Davis, K. 227S  
 Davis, P. J. 160S, 161S  
 Davis, R. J. 153S  
 Dawes, P. T. 370S  
 Dayan, C. M. 318S  
 Dbaibo, G. S. 557  
 de Alwis, M. 537  
 de Azevedo, R. B. 249S  
 de Bittencourt, Jr.,  
   P. I. H. 344S, 345S  
 de Melo, M. P. 249S  
 de Waal, R. M. W. 728  
 Debatin, K.-M. 40S  
 DeFranco, D. B. 592  
 Del Giacco, S. 296S  
 Delvig, A. A. 205S  
 Denkers, E. Y. 699  
 Derry, C. J. 260S  
 Dessi, D. 296S  
 Dettmar, P. 372S  
 Di Mauro, M. 261S  
 Diamond, A. G. 311S  
 Diaz, R. M. 717  
 Diaz-Sanchez, D. 383  
 Divecha, N. 571  
 Doglioni, C. 524  
 Dominguez, E. 175S  
 Donzé, O. 597  
 Douglas, M. S. 194S,  
   195S, 359S  
 Drasar, B. S. 287S  
 Douglas, M. S. 736  
 D'Santos, C. 571  
 Dumonde, D. C. 234S  
 Duncan, I. A. 278S  
 Dunlop, J. I. 327S, 328S  
 Dunn-Walters, D. K.  
   324S  
 Edington, N. 283S  
 Eisenhuth, I. 355S  
 Eisenman, J. 371  
 El-Ghorr, A. A. 293S  
 Ellis, R. D. 178S  
 Elmore, M. A. 217S,  
   253S, 349S  
 Elsegood, K. A. 318S  
 Elson, C. J. 312S  
 Ely, S. 397  
 Engels, P. 374  
 Erdogan, S. 374  
 Erikson, J. S. 264S  
 Esu, S. 296S  
 Esuvaranathan, K. 270S,  
   363S  
 Eugen-Olsen, J. 220S  
 Evans, C. H. 533  
 Eyles, J. E. 337S, 338S  
 Fadiel, M. M. 280S  
 Farahat, M. N. M. R.  
   207S, 371S  
 Farrow, S. 244S, 245S  
 Faveeuw, C. 261S  
 Fear, J. 232S  
 Feehally, J. 486  
 Fellenberg, J. 40S  
 Fernandez, N. 259S,  
   358S, 360S  
 Filippo, V. 188S  
 Figdor, C. G. 51S  
 Finglas, P. M. 206S  
 Fingleton, B. 155S  
 Finnen, M. J. 217S, 253S,  
   349S  
 Fisher, B. A. C. 343S  
 FitzGerald, D. J. 709  
 Fitzgerald, K. 185S  
 Fitzgerald, R. 376S  
 Flanagan, B. F. 264S  
 Flavell, R. A. 347  
 Fleming, I. M. 211S  
 Fletcher, M. 247S  
 Flint, D. J. 339S  
 Flynn, A. 192S  
 Foster-Cuevas, M. 273S,  
   275S  
 Foulstone, E. J. 191S  
 Fraser, C. 190S  
 Fraser, H. 173S  
 Frearson, J. A. 44S  
 Freel, E. M. 193S  
 Friesen, C. 40S  
 Fulda, S. 40S  
 Fuller, S. J. 210S, 223S  
 Furrie, E. 332S  
 Gachet, Y. 269S  
 Gairin, J. E. 630  
 Gallagher, A. 202S  
 Gao, L. 335S, 336S  
 Gaskell, K. M. 267S  
 Georgiou, A. 174S  
 Ghivizzani, S. C. 533  
 Ghosh, S. 561  
 Giblin, P. A. 428  
 Gibson, K. 239S  
 Gilbert, J. J. 300S  
 Gilbey, S. 314S  
 Gilchrist, J. 326S  
 Gill, D. 281S  
 Gillooly, D. J. 215S  
 Glass, C. K. 602  
 Glass, E. J. 202S, 277S  
 Glennie, M. J. 333S  
 Goddard, P. 372S  
 Godden, D. J. 292S  
 Goldman, J. 537  
 Goodacre, J. A. 311S  
 Goodall, M. 373S  
 Goodbourn, S. 498  
 Goodfield, M. 321S  
 Gooding, R. 364S  
 Goodison, S. 356S  
 Gordon, S. B. 198S  
 Gordon-Smith, T. C.  
   252S  
 Gough, M. J. 231S  
 Gould, H. J. 387  
 Gould, J. R. M. 159S  
 Gout, I. 648  
 Graf, Jr., L. H. 163S  
 Gray, L. 740  
 Greenman, J. 267S, 268S  
 Gregson, N. A. 171S,  
   172S  
 Griffin, F. 341S  
 Grillo-López, A. 70S  
 Groome, N. 168S  
 Grusby, M. J. 359  
 Grüneberg, U. 208S,  
   357S  
 Guillen, C. 315S  
 Hall, A. M. 312S  
 Hall, K. T. 353S  
 Halliday, K. E. 282S  
 Hamblin, A. S. 238S, 283S  
 Hamblin, T. J. 743  
 Hammond, G. L. 577  
 Hanna, N. 70S  
 Hannah, S. 244S, 245S  
 Harbige, L. S. 342S, 343S,  
   347S  
 Harley, V. S. 287S  
 Harlan, D. M. 651  
 Harnett, M. M. 254S,  
   299S, 300S  
 Harrison, P. T. 361S  
 Harper, N. 661  
 Harper, S. 486  
 Hartley, B. 316S  
 Haslett, C. 243S–246S  
 Hathaway, M. 256S  
 Hay, F. C. 373S  
 Hayat, S. 348S  
 Heath, A. W. 272S, 297S  
 Heeley, R. P. 236S  
 Helm, B. A. 159S  
 Hempen, P. M. 47S  
 Henry, A. J. 387  
 Herndon, J. H. 533  
 Herr, I. 40S  
 Hetzel, C. 397  
 Hewson, A. S. 362S  
 Hibbert, L. M. 451  
 Hickling, J. K. 200S, 278S  
 Hill, M. E. 217S, 253S,  
   349  
 Hill, R. 158S  
 Hill, S. 200S  
 Hinds, C. J. 184S  
 Hodell, M. 288S  
 Hodgson, J. C. 339S  
 Hoffman, R. 374  
 Hofmann, B. 220S  
 Holding, F. 274S  
 Hollifield, R. D. 234S,  
   251S  
 Hollingsworth, S. 204S  
 Holme, E. R. 317S  
 Holmes, C. 179S  
 Holmes, N. 302S, 44S  
 Homann, D. 630  
 Homer-Vanniasinkam, S.  
   231S  
 Horton, J. D. 263S  
 Horton, T. L. 263S  
 Houslay, E. S. 374  
 Houslay, M. D. 374, 211S  
 Houston, M. P. 180S  
 Howard, C. J. 203S, 291S

- Howat, W. J. 298S  
 Howe, C. A. 316S  
 Howell, S. L. 213S  
 Howlett, S. 302S, 44S  
 Hubscher, S. G. 257S  
 Hughes, D. A. 206S  
 Hughes, M. 229S  
 Hughes, R. 172S  
 Hume, R. 181S, 182S  
 Humphries, M. J. 219S  
 Hunt, A. C. 160S  
 Huston, E. 374  
 Hutchings, A. B. 322S, 332S  
 Hutchinson, I. V. 176S  
 Huzarska, M. 164S  
 Hwang, S. T. 428
- Ingram, P. E. 330S  
 Ireland, J. 187S  
 Irvine, R. F. 571  
 Iscove, N. 491
- Jackson, A. M. 365S  
 Jacobowitz Israel, E. 481  
 Jacobson, L. 66S  
 Jalkanen, S. 257S  
 James, K. 201S, 233S, 270S, 363S, 365S  
 Jamieson, D. J. 184S  
 Jamieson, P. M. 583  
 Janossy, G. 524  
 Janssen, R. 397  
 Jardine, L. J. 416  
 Jefferis, R. 373S  
 Jenkins, C. H. 351S  
 Jenkinson, D. 252S  
 Jennings, R. 272S  
 Johnson, N. 240S  
 Jones, D. G. 279S, 289S  
 Jones, P. M. 212S, 213S  
 Jones, R. K. 294S  
 Joplin, R. 232S  
 Jordan, N. 372S  
 Joyce, P. 280S  
 June, C. H. 651
- Kanner, S. B. 219S  
 Kaetzel, C. S. 47S  
 Kamei, Y. 602  
 Kang, R. 533  
 Karecla, P. 433  
 Kaur, H. 171S  
 Keenleyside, G. 346S
- Kehoe, M. A. 205S  
 Kelly, J. L. 280S  
 Kennedy, M. 371  
 Kenyon, C. J. 236S  
 Kerr, M. A. 322S, 331S–334S  
 Khalili-Shirazi, A. 172S  
 Khaw, P. T. 529  
 Kiefer, F. 491  
 Kilgour, E. 211S  
 Kilmon, M. A. 393  
 Kilpatrick, D. C. 320S  
 Kilshaw, P. J. 433  
 King, A. E. 209S  
 King, C. A. 743  
 King, P. 498  
 Kinnon, C. 537, 648  
 Kirby, J. A. 194S, 195S, 199  
 Klavinskis, L. S. 335S, 336S  
 Kirby, J. A. 736, 740  
 Knapper, J. M. E. 350S  
 Knappskog, P. M. 362S  
 Knippschild, U. 416  
 Knott, T. 225S  
 Knyazeva, L. A. 162S  
 Koene, R. A. P. 728  
 Koning, F. 664  
 Koppelhus, U. 220S  
 Kotelevstev, Y. V. 583  
 Kozinets, I. A. 214S  
 Krugmann, S. 323S  
 Kumaki, S. 371  
 Kumar, V. 174S  
 Kurokawa, R. 602  
 Kuzin, I. I. 163S
- Lachmann, P. J. 354S, 462  
 Ladds, G. 228S  
 Lai, P. 218S, 296S  
 Lamb, J. R. 397  
 Lambert, D. 740  
 Lamikanra, A. 357S  
 Lamont, A. 317S  
 Lancaster, F. 314S  
 Lanchbury, J. S. 239S  
 Lang, M. L. 332S, 333S  
 Lanotte, M. 410  
 Larsen, P. R. 588  
 Lassam, N. 491  
 Lawry, J. 197S  
 Laycock, C. 311S  
 Layward, L. 342S, 347S
- Le Douarin, B. 60S  
 Lechler, R. I. 723  
 Lee, K. P. 651  
 Lee, M. 269S  
 Lee, S. C. 679  
 Leesman, G. 274S  
 Leon, M. P. 195S, 736  
 Lestani, M. 524  
 Levi, B.-Z. 612  
 Levine, B. L. 651  
 Li, J. 204S, 306S  
 Li, Q. 612  
 Li, Z. 361  
 Lim, Y.-C. 231S  
 Limb, G. A. 178S, 234S, 250, 251S  
 Lindsey, N. J. 321S  
 Lines, J. L. 284S, 285S  
 Liu, J. W. 597  
 Liu, J. 679  
 Londei, M. 309S  
 Lorigan, P. C. 197S  
 Los, M. 40S  
 Losson, R. 60S  
 Loughlin, A. J. 191S  
 Lovering, R. C. 648  
 Lowdell, M. W. 175S  
 Lucisano, Y. M. 462  
 Lyons, V. 235S  
 Lønnerdal, B. 317S
- Mabbott, N. A. 307S  
 MacCarthy-Morrogh, L. 648  
 Macciò, A. 296S  
 MacCormac, L. P. 258S  
 MacDonald, H. R. 696  
 Mackay, G. A. 387  
 MacKenzie, S. J. 211S, 374  
 MacPherson, G. G. 351S  
 Madrigal, A. 175S  
 Mahon, B. P. 341S  
 Maile, R. 318S  
 Major, G. N. 359S, 374S  
 Makda, A. A. 217S  
 Makheja, A. N. 247S  
 Malcherek, G. 208S  
 Male, D. 170S  
 Mallucci, L. 248S  
 Mander, A. 346S  
 Manickasingham, S. P. 659
- Mann, A. 274S  
 Manoussaka, M. 174S  
 Mansfield, E. 709  
 Mantovani, G. 218S, 296S  
 Marcolongo, P. 183S  
 Marelli-Berg, F. M. 723  
 Mariuzzi, G. M. 524  
 Marshall, C. 740  
 Martin, G. 274S  
 Martinez, A. 362S  
 Mason, D. 620  
 Massa, E. 296S  
 Mata, A. M. 169S  
 Matsumoto, K. 691  
 Mattey, D. L. 290S, 370S  
 Matthews, D. J. 451  
 Matthews, G. S. 375S, 376S  
 Matthews, J. 304S  
 Mavria, G. 165S  
 Mazza, G. 312S  
 McBride, P. D. P. 334S  
 McCallum, J. F. 374  
 McCarthy-Troke, M. H. 361S  
 McCormick, A. L. 297S  
 McDonnell, J. M. 387  
 McDonnell, S. 155S  
 McInnes, I. B. 315S  
 McKee, H. I. 311S  
 McKendrick, L. 416  
 McKenzie, R. C. 282S  
 McLeod, J. D. 241S  
 McNab, G. 255S, 256S  
 McPhee, I. 374  
 McSharry, C. 317S  
 Meek, D. W. 416  
 Melendez, A. 254S  
 Melis, G. 296S  
 Melms, A. 208S  
 Meloen, R. H. 161S  
 Menestrina, F. 524  
 Meshi, B. 310S  
 Mestecky, J. 457, 466  
 Meyer, K. B. 187S  
 Michell, R. H. 303S  
 Middleditch, C. 183S  
 Middleton, B. 179S  
 Miller, K. 234S, 375S, 376S  
 Mills, K. H. G. 341S  
 Milne, D. M. 416  
 Mitchell, I. 201S  
 Monroe, J. G. 643

Monson, J. R. T. 267S, 268S  
 Montagna, L. 524  
 Moore, I. E. 298S  
 Mordsley, K. R. 260S  
 Morland, C. M. 232S  
 Morley, S. J. 190S, 503  
 Morris, M. M. 168S, 342S, 347  
 Morrison, I. E. G. 358S, 360S  
 Morrow, W. J. W. 219S  
 Moy, J. V. 194S  
 Mufti, G. 204S  
 Muller, S. 316S  
 Mullins, J. J. 583  
 Murphy, C. 368S  
 Murphy, J. J. 204S, 237S, 248S, 306S  
 Murray, A. K. 266S  
 Murray, F. E. 334S  
 Murray, J. 245S

Nalivaeva, N. N. 214S  
 Nagvekar, N. 66S  
 Nelson, P. N. 373S  
 Nelson, R. E. 277S  
 Newsholme, E. A. 350S  
 Newsholme, P. 319S, 366S–368S  
 Newton, J. L. 372S  
 Newsom-Davis, J. 66S  
 Newton, R. 154S  
 Newton, S. G. 308S  
 Ng, T. T. C. 219S, 240S  
 Nicolle, M. 66S  
 Nielsen, A. L. 60S  
 Nielsen, J. O. 220S  
 Nielsen, O. 224S  
 Niewiesk, S. 355S  
 Nikolova, E. B. 466  
 Ning, Z.-Q. 306S  
 Norton, J. D. 306S  
 Norval, M. 282S, 293S  
 Notarianni, G. B. 359S  
 Nye, K. E. 219S

O'Dowd, Y. 366S  
 Ogiastro, M.-H. 602  
 Oldstone, M. B. A. 630  
 Oliver, L. 372S  
 Orosz, C. G. 733  
 Owens, R. J. 330S  
 Ozsoy, Y. 337S

O'Leary, R. 369S  
 O'Neill, L. A. J. 185S, 304S  
 O'Neill, T. 274S  
 O'Regan, M. 203S  
 O'Shea, U. 196S  
 O'Toole, C. E. 367S

Panton, J. A. 320S  
 Pantic, N. 66S  
 Park, L. 371  
 Park, M. S. 292S  
 Parker, A. J. 266S  
 Parker, K. J. 213S  
 Parker, S. 335S, 336S  
 Parkhouse, R. M. E. 273S, 275S  
 Parkin, J. M. 240S  
 Parkin, S. M. 231S, 265S  
 Parniak, M. A. 362S  
 Parry, R. V. 241S, 304S, 305S

Parsons, K. R. 203S  
 Partridge, L. J. 321S  
 Pastan, I. 709  
 Paul, C. 167S  
 Paul, T. 314S  
 Pearson, J. P. 372S  
 Peder, A. 374  
 Pedron, S. 524  
 Peerless, A. C. J. 206S  
 Peeters, B. 186S  
 Peres, C. M. 344S  
 Perez-Cruz, I. 175S  
 Perrin, P. J. 651  
 Perry, F. E. 312S  
 Persaud, S. J. 212S  
 Pfeiffer, S. 364S  
 Phillips, K. M. 47S  
 Philpott, N. J. 352S  
 Piazzola, E. 524  
 Picard, D. 597  
 Piddlesden, S. 168S  
 Pidwell, D. 733  
 Pierce, A. 366  
 Pilling, D. 242S  
 Pinder, A. C. 206S  
 Piskurich, J. F. 47S  
 Pivanovich, I. Y. 214S  
 Pizzolo, G. 524  
 Pleass, R. J. 323S, 327S, 328  
 Postle, A. D. 346S  
 Plusa, S. M. 740

Pooley, L. 374  
 Porter, C. D. 537  
 Poulton, T. 269S  
 Power, M. 159S  
 Powner, D. 230S  
 Prach, A. T. 334S  
 Pravica, V. P. 176S  
 Preece, G. 260S  
 Price, N. T. 191S  
 Proctor, A. H. 293S  
 Proffitt, J. A. 352S  
 Proud, C. G. 191S, 192S  
 Puijk, W. C. 161S  
 Punchard, N. A. 178S, 281S  
 Pylaev, A. S. 162S  
 Pyne, N. 549  
 Pyne, S. 549

Quarantino, S. 309S

Rabinowich, H. 218S  
 Raab, M. 361  
 Rainsford, E. 301S  
 Ralston, S. H. 292S  
 Ray, K. P. 189S  
 Raynes, J. G. 286S, 287S, 348S  
 Reen, D. J. 196S, 301S  
 Rees, R. C. 266S  
 Reid, S. D. 299S  
 Rena, G. 374  
 Rezaie, P. 170S  
 Rhind, S. M. 339S  
 Ricciardi-Castagnoli, P. 200S  
 Richard, K. 182S  
 Richardson, V. J. 272S  
 Riley, J. L. 651  
 Rincón, M. 347  
 Ritchie, P. 263S  
 Ritter, J. L. 303S  
 Rix, D. A. 194S, 195S, 736  
 Robbins, P. D. 533  
 Robinson, J. H. 205S  
 Roche, W. R. 298S  
 Roder, K. H. 156S, 157S  
 Romanowski, W. 164S  
 Rombauts, W. 186S  
 Rose, D. W. 602  
 Rosen, S. D. 428  
 Rosenfeld, M. G. 602  
 Ross, A. 374

Rossi, A. G. 243S–246S  
 Rossiter, B. 174S  
 Rozengurt, E. 56S  
 Ruchaud, S. 410  
 Rudd, C. E. 361  
 Ruiter, D. J. 728  
 Russell, G. C. 202S, 277S  
 Russell, M. W. 457, 466  
 Russell, W. 251S  
 Rutherford, T. R. 252S  
 Ryan, M. 341S  
 Rybakina, E. G. 214S

Safa, O. 265S  
 Sadovnikova, E. 540  
 Saha, B. 651  
 Salami, M. 257S  
 Salmon, M. 242S, 258S, 529

Salvador, J. M. 169S  
 Samson, S. 364S  
 Sanderson, P. 351S  
 Sansom, D. M. 241S, 305S

Santanirand, P. 287S  
 Santona, M. C. 296S  
 Sawitzki, B. 269S  
 Saxon, A. 383  
 Scalzo, A. A. 691  
 Scheuerpflug, C. 40S  
 Schmoll, D. 180S  
 Schoendorf, D. S. 248S  
 Schweizer, M. 156S, 157S  
 Scotland, G. 374  
 Scott, G. S. 166S, 167S

Scott, L. J. 370S  
 Scliver, C. R. 362S  
 Searle, N. 189S  
 Searle, R. F. 294S  
 Seatter, S. D. 300S  
 Seckl, J. R. 235S, 583  
 Seddon, B. 620  
 Sedgwick, J. D. 673  
 Seiler, N. 167S

Semper, A. E. 298S  
 Senior, B. W. 329S, 334S  
 Shamsadeen, N. 242S  
 Shanin, S. N. 214S  
 Sharp, G. J. 338S  
 Sharrocks, A. D. 153S  
 Shefta, J. 314S  
 Shen, C.-R. 312S  
 Shenton, B. 740  
 Sher, A. 699

**contents — index of authors**

- Shi, Y.-B. 612  
 Shields, J. G. 200S  
 Shrestha, S. 174S  
 Sibley, D. A. 466  
 Siedek, E. M. 283S  
 Sieverts, H. 405  
 Simister, N. E. 481  
 Simms, J. R. 272S  
 Sinclair, M. C. 326S  
 Singer, M. S. 428  
 Sinnett-Smith, J. 565  
 Sivakumar, P. V. 174S  
 Skibinska, A. 233S  
 Skibinski, G. 233S  
 Slaaby, R. 225S  
 Smith, M. O. 197S  
 Smyth, M. 376S  
 Snodgrass, D. R. 340S  
 Sonnex, C. 278S  
 Southon, S. 206S  
 Spack, E. 665  
 Spellerberg, M. B. 743  
 Spencer, J. 324S  
 Spooner, R. L. 277S  
 Squiers, E. C. 288S  
 St. Louis, D. C. 651  
 Stahnke, K. 405  
 Staines, N. A. 237S–  
 239S, 310S, 316S, 661  
 Stamps, A. 217S  
 Stanford, M. R. 251S  
 Start, R. 266S  
 Stauss, H. J. 540  
 Stebbings, R. J. 284S,  
 285S  
 Stevanin, T. 248S  
 Stevenson, F. K. 743  
 Stevenson, L. M. 289S  
 Stewart, K. 173S  
 Stockinger, B. 617  
 Stockley, P. G. 158S  
 Stone, J. D. 302S, 445  
 Story, C. M. 481  
 Stott, E. J. 284S, 285S  
 Studer, E. J. 393  
 Sugden, P. H. 221S, 222S  
 Sugino, T. 356S  
 Sullivan, M. 374  
 Sutcliffe, R. G. 236S  
 Sutton, B. J. 387  
 Swinnen, J. 186S
- Talbot, S. 195S  
 Tarin, D. 356S  
 Tax, W. J. M. 728  
 Taylor-Robinson, A. W.  
 262S  
 Tejura, S. 217S  
 ter Meulen, V. 355S  
 Thole, J. 397  
 Thomas, M. S. 297S  
 Thompsett, A. 743  
 Thompson, R. P. H. 178S  
 Thompson, S. 274S  
 Thompson, S. J. 274S  
 Thomson, M. 286S  
 Thornalley, P. J. 250S  
 Thrasher, A. J. 537  
 Tibbles, L. A. 491  
 Tice, D. G. 288S  
 Timon, M. 177S  
 Todd, A. 325S  
 Todd, J. A. 314S  
 Tolan, D. G. 549  
 Tomana, M. 466  
 Toomey, J. A. 174S  
 Topping, K. P. 268S  
 Torchia, J. 602  
 Torielli, L. 236S  
 Tournier, S. 269S  
 Travers, P. 357S  
 Treacy, E. P. 362S  
 Treagus, J. E. 571  
 Trembleau, S. 625  
 Triantafilou, K. 259S,  
 358S, 360  
 Trowsdale, J. 208S  
 Turner, S. J. 216S
- Ulrich, T. 274S  
 Uttridge, J. 278S
- Van Ham, S. M. 208S  
 van de Bruggen, P. 544  
 Van den Eynde, B. J. 544  
 van Kooyk, Y. 515  
 Van Pel, A. 544  
 Van Pinxteren, L. A. H.  
 340S  
 Vanderhoek, J. Y. 247S  
 Vann, L. 571  
 Varley, C. 274S
- Varns, C. 705  
 Verhoeven, G. 186S  
 Verrijdt, G. 186S  
 Vile, R. G. 717  
 Vincent, A. 665  
 von Herrath, M. G. 630  
 Vora, A. R. 266S  
 Vries, R. G. J. 192S
- Wal, J.-M. 375S  
 Walker, K. B. 284S, 285S  
 Walker, L. S. K. 241S  
 Wallace, H. M. 292S  
 Wallace, R. 235S  
 Ward, C. 244S, 245S  
 Ward, F. J. 310S, 661  
 Ward, R. 335S, 336S  
 Ward, S. G. 216S, 241S,  
 304S, 305S  
 Warnock, M. G. 311S  
 Waters, P. J. 362S  
 Watkins, S. L. 180S  
 Watson, M. D. 263S  
 Watson, P. 226S  
 Watts, M. 274S  
 Webb, D. H. 350S  
 Webster, L. 250S  
 Wells, V. 248S  
 Welsh, G. I. 191S  
 West, A. J. 251S  
 West, D. C. 264S  
 Westin, S. 602  
 Westphal, J. R. 728  
 Westwick, J. 216S  
 Westwood, O. M. 373S  
 Whelan, H. E. 280S  
 Whetton, A. D. 366  
 Whiteside, T. L. 218S  
 Whitmarsh, A. J. 153S  
 Wickremasinghe, R. G.  
 219S  
 Wildblood, L. A. 279S  
 Wiley, K. 198S  
 Wilkinson, I. 374  
 Willcox, N. 665  
 Willems, R. W. 728  
 Williams, A. 257S  
 Williams, B. R. G. 509  
 Williams, C. M. 350S  
 Williams, D. G. 316S  
 Williams, K. I. 166S
- Williams, L. J. S. 235S,  
 583  
 Williams, S. C. 160S,  
 161S  
 Williamson, E. D. 337S,  
 338S  
 Williamson, T. H. 234S  
 Wilson, K. M. 259S, 358S,  
 360  
 Wolf, S. S. 156S, 157S  
 Wolfe, A. P. 354, 612  
 Wong, J. 612  
 Wood, E. J. 369S  
 Woodgett, J. R. 491  
 Woodman, A. 356S  
 Woof, J. M. 323S, 327S–  
 330S  
 Wright, A. J. A. 206S  
 Wraith, D. C. 659  
 Wu, M. 158S
- Xu, L. 602
- Yang, S.-h. 153S  
 Yaqoob, P. 350S  
 Yarwood, S. 374  
 Yates, P. R. 153S  
 Yazici, Z. A. 321S  
 Yokoyama, W. M. 691  
 Yong, K. L. 258S  
 Yoong, K. F. 257S, 271S  
 Yoshida, K. 356S  
 You, J. 605  
 Young, D. 397  
 Young, D. G. 365S  
 Young, J. R. 203S  
 Young, S. P. 303S  
 Youngman, K. R. 475
- Zagato, L. 236S  
 Zal, T. 617  
 Zanke, B. 491  
 Zhang, J.-G. 194S  
 Zhang, K. 383  
 Zhang, W. 462  
 Zhang, X. 200S  
 Zhu, D. 743  
 Zubelewicz, B. 164S  
 Zugaza, J. L. 565