

Pharmacology of Adrenoceptors

Edited by

E. Szabadi

C. M. Bradshaw

S. R. Nahorski



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PHARMACOLOGY OF ADRENOCEPTORS

Edited by

E. Szabadi

*Department of Psychiatry
University of Manchester
Manchester M13 9PT*

C.M. Bradshaw

*Department of Psychiatry
University of Manchester
Manchester M13 9PT*

and

S.R. Nahorski

*Department of Pharmacology and Therapeutics
University of Leicester
Leicester LE1 7RH*



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The Contributors*

H. Adachi, Tsukuba Research Laboratories, Eisai Co Ltd, Tokodai, Toiyosatomachi, Tsukubagun, Ibaraki 300-26, Japan	267	G.H. Apperley, Department of Cardiovascular Pharmacology, Glaxo Group Research Ltd, Ware, Herts. SG12 0DJ, UK	271
V. Adam-Vizi, Second Institute of Biochemistry, Sемmelweis University of Medicine, PO Box 262, H-1444 Budapest, Hungary	337	N. Ashizawa, Department of Pharmacology, Shizuoka College of Pharmaceutical Sciences, Shizuoka 422, Japan	311
W.B. Adams, Biozentrum der Universität, Abteilung Pharmakologie, Klingelbergstrasse 70, Basel, Switzerland	305	P. Åstrand, Department of Physiology, Karolinska Institutet, S-10401 Stockholm, Sweden	157, 327
R.M. Ademe, Department of Anesthesiology and Pharmacology, The University of Texas Health Science Center, San Antonio, Texas, USA	301	P.J. Barnes, Department of Medicine (Respiratory Division), Royal Postgraduate Medical School, Hammersmith Hospital, London W12, UK	205
J.M. Aldridge, Department of Cardiovascular Pharmacology, Glaxo Group Research Ltd, Ware, Herts. SG12 0DJ, UK	271	D.B. Barnett, Department of Pharmacology and Therapeutics, University of Leicester and Department of Pharmacology, Clinical Sciences Building, Leicester Royal Infirmary, Leicester LE2 7LX, UK	225
G. Alya, Laboratoire de Physiologie Animale, CNRS, UA No. 290, 40 Avenue du Recteur Pineau, 86022 Poitiers Cédex, France	279	L. Beani, Department of Pharmacology, University of Ferrara, Via Fossato di Mortara 23, 44100 Ferrara, Italy	167
T. Antonelli, Department of Pharmacology, University of Ferrara, Via Fossato di Mortara 23, 44100 Ferrara, Italy	167	C. Bianchi, Department of Pharmacology, University of Ferrara, Via Fossato di Mortara 23, 44100 Ferrara, Italy	167

* The numbers in **bold** adjacent to the names indicate the first page on which that contributor's contribution(s) appears.

- D. Bojanic,** 31, 285
Department of Pharmacology and
Therapeutics,
Medical Sciences Building,
University of Leicester, University Road,
Leicester LE1 7RH, UK
- T.B. Bolton,** 147
Department of Pharmacology,
St George's Hospital Medical School,
London SW17 0RE, UK
- J.P. Bourreau,** 279
Laboratoire de Physiologie Animale,
CNRS, UA No. 290,
40 Avenue du Recteur Pineau,
86022 Poitiers Cédex, France
- P.B. Bradley,** 119
Department of Pharmacology,
The Medical School,
Birmingham B15 2TJ, UK
- C.M. Bradshaw,** 97
Department of Psychiatry,
University of Manchester,
Stopford Building, Oxford Road,
Manchester M13 9PT, UK
- H.-J. Braun,** 335
Department of Pharmacology,
University of Mainz,
Obere Zahlbacher Str. 67,
D-6500 Mainz, Federal Republic of Germany
- E. Brenner,** 321
Netherlands Institute for Brain Research,
Amsterdam, The Netherlands
- A.M. Broadhurst,** 293
Department of Pharmacology,
Wyeth Laboratories,
Huntercombe Lane South, Taplow,
Maidenhead, Berks. SL6 0PH, UK
- O.-E. Brodde,** 341
Biochemical Research Laboratory,
Medizinische Klinik und Poliklinik,
Div. of Renal and Hypertensive Diseases,
University of Essen,
D-4300 Essen, German Federal Republic
- E. Brown,** 287
Department of Pharmacology
and Therapeutics,
Medical Sciences Building,
University of Leicester,
University Road, Leicester LE1 7RH, UK
- T. Capiod,** 135
MRC Receptor Mechanisms
Research Group,
Department of Pharmacology,
University College London,
Gower Street, London WC1E 6BT, UK
- M.G. Caron,** 23, 297
Howard Hughes Medical Institute,
Departments of Medicine (Cardiology),
Biochemistry, and Physiology,
Duke University Medical Center,
Durham, North Carolina 17710, USA
- S. Carpentier,** 177
Department of Pharmacology,
St Louis University School of Medicine,
1402 South Grand Boulevard,
St Louis, Missouri 63104, USA
- H. Carswell,** 31
Department of Pharmacology and
Therapeutics,
Medical Sciences Building,
University of Leicester, University Road,
Leicester LE1 7RH, UK
Present address:
Department of Pharmacology,
University of Cambridge,
Medical School, Hills Road,
Cambridge CB2 2QD, UK
- C.B. Chapleo,** 273
Department of Medicinal Chemistry,
Reckitt and Colman plc,
Dansom Lane, Kingston-upon-Hull
HU8 7DS, UK
- S. Checkley,** 235
Maudsley Hospital,
Denmark Hill, London SE5 8AZ, UK
- J.M. Clifford,** 343
Pharmaceutical Division,
Reckitt & Colman, Hull HU8 7DS, UK
- T.M. Connolly,** 49
Department of Pharmacology,
Vanderbilt University,
Nashville, Tennessee 37232, USA
Present address:
Department of Biochemistry,
Washington University,
St Louis, Missouri, USA

- I.B. Davies,** 339
Department of Clinical Pharmacology,
St Bartholomew's Hospital,
London EC1A 7BE, UK
- J.C. De Agustin,** 299
Dpto. Farmacología,
Fac. Medicina Autónoma, Madrid, Spain
and
Dpto. Farmacología,
Fac. Medicina, Alicante, Spain
- R.M. DeMarinis,** 297
Smith Kline & French Laboratories,
Philadelphia, Pennsylvania 19101, USA
- J. de Vente,** 247
Department of Pharmacology,
Molecular Pharmacology Section,
Free University, 1007 MC Amsterdam,
The Netherlands
- J.R. Docherty,** 319
Department of Clinical Pharmacology,
Royal College of Surgeons in Ireland,
Dublin 2, Ireland
- S.A. Doggrell,** 277
Department of Pharmacology
and Clinical Pharmacology,
School of Medicine,
University of Auckland,
Private Bag, Auckland, New Zealand
- J.C. Doxey,** 13
Department of Pharmacology,
Pharmaceutical Division,
Reckitt and Colman plc,
Dansom Lane, Hull HU8 7DS, UK
- G.M. Drew,** 271
Department of Cardiovascular
Pharmacology,
Glaxo Group Research Ltd,
Ware, Herts. SG12 0DJ, UK
- T.V. Dunwiddie,** 87
Denver VA Hospital (151),
1055 Clermont St, Denver,
Colorado 80220, USA
and
Dept of Pharmacology C236,
University of Colorado
Health Sciences Center,
4200 East Ninth Avenue, Denver,
Colorado 80262, USA
- S.C. Edmonds,** 277
Department of Pharmacology
and Clinical Pharmacology,
School of Medicine,
University of Auckland,
Private Bag, Auckland, New Zealand
- J.N. Fain,** 59
Section of Biochemistry,
Division of Biology and Medicine,
Brown University,
Providence, Rhode Island 02912, USA
- M. Feletou,** 279
Laboratoire de Physiologie Animale,
CNRS, UA No. 290,
40 Avenue du Recteur Pineau,
86022 Poitiers Cédex, France
- A. Field,** 135
MRC Receptor Mechanisms
Research Group,
Department of Pharmacology,
University College London,
Gower Street, London WC1E 6BT, UK
- D. Fitzgerald,** 197
Department of Clinical Pharmacology,
Royal College of Surgeons in Ireland,
St Stephen's Green, Dublin 2, Ireland
and
The Blood Pressure Clinic,
The Charitable Infirmary,
Jervis Street, Dublin 1, Ireland
- N.A. Flavahan,** 43
Department of Physiology and Biophysics,
Mayo Clinic and Mayo Foundation,
Rochester, Minnesota 55905, USA
- T.J. Franklin,** 79
Imperial Chemical Industries plc,
Pharmaceuticals Division,
Alderley Park, Macclesfield, Cheshire, UK
- H. Fuder,** 335
Department of Pharmacology,
University of Mainz,
Obere Zahlbacher Str. 67,
D-6500 Mainz, Federal Republic of Germany
- E. García,** 299
Dpto. Farmacología,
Fac. Medicina Autónoma, Madrid, Spain
and
Dpto. Farmacología,
Fac. Medicina, Alicante, Spain

- M.A. Giembycz,** 315, 317
Department of Physiology
and Pharmacology,
University of Strathclyde,
Glasgow G1 1XW, UK
- G. Gorgolewska,** 339
Department of Clinical Pharmacology,
St Bartholomew's Hospital,
London EC1A 7BE, UK
- Y. Goshima,** 329, 331
Department of Pharmacology,
Yokohama City University
School of Medicine,
Yokohama, Japan
- Y. Hagino,** 295
Department of Pharmacology,
Fujita-Gakuen University
School of Medicine,
Toyoake, Aichi 470-11, Japan
- H.H. Harms,** 247
Department of Pharmacology,
Molecular Pharmacology Section,
Free University, 1007 MC Amsterdam,
The Netherlands
- L.G. Hársing,** 333
Institute of Experimental Medicine,
Hungarian Academy of Sciences,
POB 67, H-1450 Budapest, Hungary
- E. Hayashi,** 311
Department of Pharmacology,
Shizuoka College of Pharmaceutical Sciences,
Shizuoka 422, Japan
- M. Hayashi,** 311
Department of Pharmacology,
Shizuoka College of Pharmaceutical Sciences,
Shizuoka 422, Japan
- J.F. Horga,** 299
Dpto. Farmacología,
Fac. Medicina Autónoma, Madrid, Spain
and
Dpto. Farmacología,
Fac. Medicina, Alicante, Spain
- E. Höslí,** 109
Department of Physiology,
University of Basel,
Vesalgasse 1, CH-4051 Basel, Switzerland
- L. Höslí,** 109
Department of Physiology,
University of Basel,
Vesalgasse 1, CH-4051 Basel, Switzerland
- P.A. Insel,** 215
Division of Pharmacology, M-013 H,
Department of Medicine,
University of California, San Diego,
La Jolla, California 92093, USA
- K. Izuhara,** 295
Department of Pharmacology,
Fujita-Gakuen University
School of Medicine,
Toyoake, Aichi 470-11, Japan
- J.-D. Jansen,** 247
Department of Medicinal Chemistry,
Molecular Pharmacology Section,
Free University, 1007 MC Amsterdam,
The Netherlands
- D.H. Jenkinson,** 135
MRC Receptor Mechanisms
Research Group,
Department of Pharmacology,
University College London,
Gower Street, London WC1E 6BT, UK
- R.D. Johnson,** 303
Department of Pharmacology,
Emory University Medical School,
Atlanta, Georgia 30322, USA
- D.J. Jones,** 301
Department of Anesthesiology
and Pharmacology,
The University of Texas
Health Science Center,
San Antonio, Texas, USA
- A. Karjalainen,** 281
Department of Pharmacology,
University of Oulu,
SF-90220 Oulu 22, Finland
- N.T. Kärki,** 281
Department of Pharmacology,
University of Oulu,
SF-90220 Oulu 22, Finland
- J. Kelly,** 197
Department of Clinical Pharmacology,
Royal College of Surgeons in Ireland,
St Stephen's Green, Dublin 2, Ireland
and

- The Blood Pressure Clinic,
The Charitable Infirmary,
Jervis Street, Dublin 1, Ireland
- D.A. Kendall,** 287
Department of Pharmacology
and Therapeutics,
Medical Sciences Building,
University of Leicester,
University Road, Leicester LE1 7RH, UK
- S.A. Kilfeather,** 339
Department of Clinical Pharmacology,
St Bartholomew's Hospital,
London EC1A 7BE, UK
- M.Č. Kržan,** 307
Department of Pharmacology,
Medical Faculty, University of Ljubljana,
Yugoslavia
- T. Kubo,** 329, 331
Department of Pharmacology,
Yokohama City University
School of Medicine,
Yokohama, Japan
- P.W. Kühn,** 305
Friedrich Miescher-Institut,
Postfach 2543, Basel, Switzerland
- F.F.Y. Lam,** 317
Department of Physiology
and Pharmacology,
University of Strathclyde,
Glasgow G1 1XW, UK
- A.C. Lane,** 13
Department of Pharmacology,
Pharmaceutical Division,
Reckitt and Colman plc,
Dansom Lane, Hull HU8 7DS, UK
- N. Lattimer,** 263
Departments of Chemistry
and Pharmacology,
Wyeth Research (UK),
Huntercombe Lane South, Taplow,
Maidenhead, Berks. SL6 0PH, UK
- R.J. Lefkowitz,** 23, 297
Howard Hughes Medical Institute,
Departments of Medicine (Cardiology),
Biochemistry, and Physiology,
Duke University Medical Center,
Durham, North Carolina 17710, USA
- R. Lew,** 283
Department of Pharmacology,
University of Melbourne,
Parkville, Victoria 3052, Australia
- L.E. Limbird,** 49
Department of Pharmacology,
Vanderbilt University,
Nashville, Tennessee 37232, USA
- I. Litosch,** 59
Section of Biochemistry,
Division of Biology and Medicine,
Brown University,
Providence, Rhode Island 02912, USA
- N. Ludvig,** 269
Institute of Experimental Medicine,
Hungarian Academy of Sciences,
POB 67, H-1450 Budapest, Hungary
- G.A. McPherson,** 275
School of Pharmacology,
Victorian College of Pharmacy,
Parkville, Victoria 3052, Australia
- C. Maccarrone,** 275
School of Pharmacology,
Victorian College of Pharmacy,
Parkville, Victoria 3052, Australia
- H. Maekawa,** 295
Department of Pharmacology,
Fujita-Gakuen University
School of Medicine,
Toyoake, Aichi 470-11, Japan
- E. Malta,** 275
School of Pharmacology,
Victorian College of Pharmacy,
Parkville, Victoria 3052, Australia
- D.B. Marriott,** 289
Department of Pharmacology
and Therapeutics,
Medical Sciences Building,
University of Leicester,
University Road, Leicester LE1 7RH, UK
- W.D. Matthews,** 125
Department of Investigative Toxicology,
Smith Kline and French Laboratories,
1500 Spring Garden Street,
Philadelphia, Pennsylvania 19101, USA

- | | | | |
|--|--------------------------|---|------------|
| M.J. Meldrum,
Department of Pharmacology,
St Louis University School of Medicine,
1402 South Grand Boulevard,
St Louis, Missouri 63104, USA | 177 | C.B. Neylon,
Department of Pharmacology,
University of Melbourne,
Parkville, Victoria 3052, Australia | 283 |
| A.D. Michel,
Department of Pharmacology,
Syntex Research Centre,
Heriot-Watt University,
Edinburgh EH14 4AS, UK | 291 | H. Nomura,
Department of Pharmacology,
Fujita-Gakuen University
School of Medicine,
Toyoake, Aichi 470-11, Japan | 295 |
| K.P. Minneman,
Department of Pharmacology,
Emory University Medical School,
Atlanta, Georgia 30322, USA | 303 | T. Nomura,
Department of Pharmacology,
Fujita-Gakuen University
School of Medicine,
Toyoake, Aichi 470-11, Japan | 295 |
| M. Mirmiran,
Netherlands Institute for Brain Research,
Amsterdam, The Netherlands | 321 | E. O'Brien,
Department of Clinical Pharmacology,
Royal College of Surgeons in Ireland,
St Stephen's Green, Dublin 2, Ireland
and
The Blood Pressure Clinic,
The Charitable Infirmary,
Jervis Street, Dublin 1, Ireland | 197 |
| Y. Misu,
Department of Pharmacology,
Yokohama City University
School of Medicine,
Yokohama, Japan | 329, 331 | S.R. O'Donnell,
Department of Physiology
and Pharmacology,
University of Queensland,
Brisbane, Queensland, Australia 4067 | 313 |
| A.L. Mueller,
Dept of Neurological Surgery RI-20,
University of Washington
School of Medicine,
Seattle, Washington, USA | 87 | K. O'Malley,
Department of Clinical Pharmacology,
Royal College of Surgeons in Ireland,
St Stephen's Green, Dublin 2, Ireland
and
The Blood Pressure Clinic,
The Charitable Infirmary,
Jervis Street, Dublin 1, Ireland | 197 |
| P. Müller,
Friedrich Miescher-Institut,
Basel, Switzerland | 69 | D.C. Ogden,
MRC Receptor Mechanisms
Research Group,
Department of Pharmacology,
University College London,
Gower Street, London WC1E 6BT, UK | 135 |
| E. Müller-Bardey,
Friedrich Miescher-Institut,
Basel, Switzerland | 69 | V. Piercy,
Beecham Pharmaceuticals Research Division,
Biosciences Research Centre, Epsom, UK | 309 |
| M.B.H. Mustafa,
Department of Physiology
and Pharmacology,
University of Queensland,
Brisbane, Queensland, Australia 4067 | 313 | W.R. Proctor,
Dept of Pharmacology C236,
University of Colorado
Health Sciences Center,
4200 East Ninth Avenue, Denver,
Colorado 80262, USA | 87 |
| S.R. Nahorski,
Department of Pharmacology
and Therapeutics,
Medical Sciences Building,
University of Leicester,
University Road, Leicester LE1 7RH, UK | 31, 285, 287, 289 | | |
| M. Nakamoto,
Department of Pharmacology,
Shizuoka College of Pharmaceutical Sciences,
Shizuoka 422, Japan | 311 | | |

- J. Puurunen,** 281
Department of Pharmacology,
University of Oulu,
SF-90220 Oulu 22, Finland
- P.E. Rafuse,** 325
Department of Pharmacology,
University of Alberta,
Edmonton, Alberta, Canada
- A.G. Ramage,** 323
Academic Department of Pharmacology,
Royal Free Hospital School of Medicine,
Rowland Hill Street,
London NW3 2PF, UK
- C. Raper,** 275
School of Pharmacology,
Victorian College of Pharmacy,
Parkville, Victoria 3052, Australia
- J.W. Regan,** 297
Howard Hughes Medical Institute,
Duke University Medical Center,
Durham, North Carolina 27710, USA
- K.F. Rhodes,** 263, 265
Department of Pharmacology,
Wyeth Research (UK),
Huntercombe Lane South, Taplow,
Maidenhead, Berks. SL6 0PH, UK
- A.G. Roach,** 13, 261
Department of Pharmacology,
Reckitt and Colman plc,
Pharmaceutical Division,
Dansom Lane, Hull HU8 7DS, UK
- I.W. Rodger,** 315, 317
Department of Physiology
and Pharmacology,
University of Strathclyde,
Glasgow G1 1XW, UK
- R.R. Ruffolo,** 3, 259
Department of Pharmacology,
Smith Kline & French Laboratories,
Philadelphia, Pennsylvania 19101, USA
- H. Ruskoaho,** 281
Department of Pharmacology,
University of Oulu,
SF-90220 Oulu 22, Finland
- J.-M. Savola,** 281
Department of Pharmacology,
University of Oulu,
SF-90220 Oulu 22, Finland
- R. Schimkus,** 335
Department of Pharmacology,
University of Mainz,
Obere Zahlbacher Str. 67,
D-6500 Mainz, Federal Republic of Germany
- M. Shahid,** 315, 317
Department of Physiology
and Pharmacology,
University of Strathclyde,
Glasgow G1 1XW, UK
- S. Sharma,** 263
Departments of Chemistry
and Pharmacology,
Wyeth Research (UK),
Huntercombe Lane South, Taplow,
Maidenhead, Berks. SL6 0PH, UK
- R.D. Sheridan,** 97
Department of Psychiatry,
University of Manchester,
Stopford Building, Oxford Road,
Manchester M13 9PT, UK
- T. Shoji,** 267
Tsukuba Research Laboratories,
Eisai Co Ltd, Tokodai,
Toyosatomachi, Tsukubagun,
Ibaraki 300-26, Japan
- S. Simonet,** 279
Laboratoire de Physiologie Animale,
CNRS, UA No. 290,
40 Avenue du Recteur Pineau,
86022 Poitiers Cédex, France
- C.F.C. Smith,** 13, 261
Department of Pharmacology,
Reckitt and Colman plc,
Pharmaceutical Division,
Dansom Lane, Hull HU8 7DS, UK
- P.A. Smith,** 325
Department of Pharmacology,
University of Alberta,
Edmonton, Alberta, Canada
- S.E. Smith,** 243
Department of Pharmacology,
St Thomas's Hospital Medical School,
London SE1, UK
- G.T. Somogyi,** 333
Institute of Experimental Medicine,
Hungarian Academy of Sciences,
POB 67, H-1450 Budapest, Hungary

- | | | | |
|--|-----------------|---|----------------------|
| M. Staehelin,
Department of Research,
University Hospital,
Basel, Switzerland | 69 | S. Tanganelli,
Department of Pharmacology,
University of Ferrara,
Via Fossato di Mortara 23,
44100 Ferrara, Italy | 167 |
| J.A. Stephenson,
Department of Pharmacology,
University of Melbourne,
Parkville, Victoria 3052, Australia | 283 | T. Tomita,
Department of Pharmacology,
Shizuoka College of Pharmaceutical Sciences,
Shizuoka 422, Japan | 311 |
| G.L. Stiles,
Howard Hughes Medical Institute,
Departments of Medicine (Cardiology),
Biochemistry, and Physiology,
Duke University Medical Center,
Durham, North Carolina 17710, USA | 23 | R. Tricoche,
Laboratoire de Physiologie Animale,
CNRS, UA No. 290,
40 Avenue du Recteur Pineau,
86022 Poitiers Cédex, France | 279 |
| M.R. Stillings,
Department of Medicinal Chemistry,
Reckitt and Colman plc,
Dansom Lane, Kingston-upon-Hull
HU8 7DS, UK | 273 | I.F. Tulloch,
Department of Pharmacology,
Reckitt and Colman plc,
Pharmaceutical Division,
Dansom Lane, Hull HU8 7DS, UK | 261 |
| L. Stjärne,
Department of Physiology,
Karolinska Institutet,
S-10401 Stockholm, Sweden | 157, 327 | P. Turner,
Department of Clinical Pharmacology,
St Bartholomew's Hospital,
London EC1A 7BE, UK | 339 |
| R.J. Summers,
Department of Pharmacology,
University of Melbourne,
Parkville, Victoria 3052, Australia | 283 | H. Ueda,
Department of Pharmacology,
Faculty of Pharmaceutical Sciences,
Kyoto University, Kyoto, Japan | 329, 331 |
| S.S. Swart,
Department of Pharmacology
and Therapeutics,
University of Leicester
and
Department of Pharmacology,
Clinical Sciences Building,
Leicester Royal Infirmary,
Leicester LE2 7LX, UK | 225 | F. van Haaren,
Netherlands Institute for Brain Research,
Amsterdam, The Netherlands | 321 |
| J.D. Sweatt,
Department of Pharmacology,
Vanderbilt University,
Nashville, Tennessee 37232, USA | 49 | P.M. Vanhoutte,
Department of Physiology and Biophysics,
Mayo Clinic and Mayo Foundation,
Rochester, Minnesota 55905, USA | 43 |
| E. Szabadi,
Department of Psychiatry,
University of Manchester,
Stopford Building, Oxford Road,
Manchester M13 9PT, UK | 97 | E.S. Vizi,
Institute of Experimental Medicine,
Hungarian Academy of Sciences,
POB 67, H-1450 Budapest, Hungary | 187, 269, 333 |
| M. Tachibana,
Department of Pharmacology,
Nagoya University School of Medicine,
Showa, Nagoya 466, Japan | 295 | M. Walden,
Laboratoire de Physiologie Animale,
CNRS, UA No. 290,
40 Avenue du Recteur Pineau,
86022 Poitiers Cédex, France | 279 |
| | | M. Wallace,
Section of Biochemistry,
Division of Biology and Medicine,
Brown University,
Providence, Rhode Island 02912, USA | 59 |

- | | | | |
|---|-----------------|---|------------|
| D.S. Walter,
Department of Pharmacology,
Pharmaceutical Division,
Reckitt and Colman plc,
Dansom Lane, Hull HU8 7DS, UK | 13 | A.L. Willcocks,
Department of Pharmacology
and Therapeutics,
Medical Sciences Building,
University of Leicester,
University Road, Leicester LE1 7RH, UK | 289 |
| J.C. Wanstall,
Department of Physiology
and Pharmacology,
University of Queensland,
Brisbane, Queensland, Australia 4067 | 313 | M.G. Wyllie,
Department of Pharmacology,
Wyeth Laboratories,
Huntercombe Lane South, Taplow,
Maidenhead, Berks. SL6 0PH, UK | 293 |
| T.J. Ward,
Departments of Chemistry
and Pharmacology,
Wyeth Research (UK),
Huntercombe Lane South, Taplow,
Maidenhead, Berks. SL6 0PH, UK | 263 | C.-Y. Xue,
Department of Pharmacology,
St Louis University School of Medicine,
1402 South Grand Boulevard,
St Louis, Missouri 63104, USA | 177 |
| J.F. Waterfall,
Department of Pharmacology,
Wyeth Research (UK),
Huntercombe Lane South, Taplow,
Maidenhead, Berks. SL6 0PH, UK | 263, 265 | S. Yamada,
Department of Pharmacology,
Shizuoka College of Pharmaceutical Sciences,
Shizuoka 422, Japan | 311 |
| T.C. Westfall,
Department of Pharmacology,
St Louis University School of Medicine,
1402 South Grand Boulevard,
St Louis, Missouri 63104, USA | 177 | J. Zaagsma,
Department of Pharmacology
and Therapeutics,
State University of Groningen,
9713 AW Groningen, The Netherlands
and
Department of Medicinal Chemistry,
Molecular Pharmacology Section,
Free University, 1007 MC Amsterdam,
The Netherlands | 247 |
| R.L. Whiting,
Department of Pharmacology,
Syntex Research Centre,
Heriot-Watt University,
Edinburgh EH14 4AS, UK | 291 | J.A. Zidichouski,
Department of Pharmacology,
University of Alberta,
Edmonton, Alberta, Canada | 325 |
| S.J. Wilkinson,
Academic Department of Pharmacology,
Royal Free Hospital School of Medicine,
Rowland Hill Street,
London NW3 2PF, UK | 323 | I. Zimányi,
Institute of Experimental Medicine,
Hungarian Academy of Sciences,
POB 67, H-1450 Budapest, Hungary | 333 |

Preface

This book contains the proceedings of an international meeting which was held at the University of Manchester in August 1984. The meeting was a satellite symposium to the 9th International Congress of Pharmacology which had been held in London prior to the satellite. The meeting was also the second international symposium on adrenoceptors held at the University of Manchester – the first meeting took place in July 1978 as a satellite to the 7th International Congress of Pharmacology.

The first adrenoceptor symposium in Manchester played an important role in summarizing developments in this area and recording 'the state of the art' in 1978, and the published proceedings of that meeting are still used as a standard reference work (Szabadi *et al.*, 1978). When the first meeting was organized we did not have the intention of having another meeting in six years' time. There are several reasons why we decided to organize a second adrenoceptor symposium in Manchester. Firstly, there have been remarkable new developments in the field of adrenoceptor pharmacology over the past six years. Secondly, the organization of the 9th International Congress of Pharmacology in London created a unique opportunity to invite colleagues from all over the world to Manchester.

The format of the meeting was very similar to that of the previous one. The meeting lasted for three days and consisted of six sessions, each session being devoted to one major area of adrenoceptor pharmacology (classification, biochemistry, cellular electrophysiology, release modulation and clinical aspects). Each session consisted of two to five invited lectures. The sessions were introduced and summed-up by chairmen and their contributions are included in this book as *Chairman's Comments*. Forty-three contributed papers were presented as poster communications; these contributions are included in the form of two-page short papers in the book.

We believe that the symposium, and thus the book, truly reflects the current state of adrenoceptor pharmacology. It is interesting to compare the current symposium with the 1978 meeting and to record how our views have changed over the past six years. In 1984 there seems to be a somewhat greater interest in α -adrenoceptors than in β -adrenoceptors, and the separate pharmacological properties of α_1 - and α_2 -adrenoceptors are still the subject of intense enquiry. While in 1978 the adenylate cyclase system and its relation to adrenoceptor activation was in the forefront of much biochemical research, now the emphasis seems to have shifted to the phospholipid/calcium ion system and its role in α -adrenoceptor mediated responses. Cellular pharmacology has further developed, and the establishment of *in vitro* preparations (tissue slices and cell cultures) has helped to define the ionic mechanisms underlying adrenoceptor activation. A considerable development is the establishment of the distribution of different kinds of adrenoceptors in the central nervous system and the emergence of a clear pattern of regional differences between brain structures. The role of the different adrenoceptors in the integrated function of the brain, however, still remains elusive. There have been further developments in the clinical field – consistent changes in adrenoceptor numbers and adrenoceptor-mediated responses have been established in such diverse

conditions as hypertension, bronchial asthma, disorders of blood clotting and depression. In most instances, however, it is still not clear to what extent the changes in adrenoceptors have a pathogenetic role or are rather the consequences of the disease.

It was a great pleasure for the organizers to be able to greet so many old friends in Manchester and also to see some new faces working in the field of adrenoceptor pharmacology. We were saddened, however, by the absence of some of our friends and colleagues. In particular, we missed the presence of Raymond P. Ahlquist who made such a significant and personal contribution to the 1978 meeting. We were greatly distressed by Ray's death and we dedicate this book to his memory.

The making of this book reflects the dedicated hard work of many people. We are grateful to R.R. Ruffolo and E.S. Vizi who worked with us on the Programme Committee. We are grateful to all contributors for the hard work they put into the meeting and for the preparation of excellent manuscripts according to a strict time schedule. We wish to thank the University of Manchester for excellent conference facilities and the City of Manchester for a Civic Reception. We are indebted to our many sponsors for their generous financial help which enabled us to organize this meeting; their names are listed earlier. We wish to thank our colleagues from our laboratory (R.D. Sheridan, J. Longmore and M.J. Morley) for their help during the meeting. We are grateful to R. Osborne of The Macmillan Press for his help with the publication of this book. Last, but not least, we are grateful for the excellent secretarial help of Deborah Kay and Hilary Neve.

Manchester, August 1984

E.S.
C.M.B.
S.R.N.

Reference

Szabadi, E., Bradshaw, C.M. and Bevan, P. (1978). *Recent Advances in the Pharmacology of Adrenoceptors*, Elsevier/North Holland, Amsterdam.