

OXFORD TEXTBOOK OF MEDICINE

SECOND EDITION

Edited by

D. J. WEATHERALL

J. G. G. LEDINGHAM

D. A. WARRELL

VOLUME I

Sections 1-12 and Index

OXFORD TEXTBOOK OF MEDICINE

SECOND EDITION

Edited by

D. J. WEATHERALL

Nuffield Professor of Clinical Medicine, University of Oxford

J. G. G. LEDINGHAM

May Reader in Medicine, Nuffield Department of Clinical Medicine, University of Oxford

D. A. WARRELL

*Clinical Reader in Medicine and Honorary Consultant, Nuffield Department of Clinical Medicine,
University of Oxford*

VOLUME 1

Sections 1-12



Oxford Melbourne New York
OXFORD UNIVERSITY PRESS

1987

*Oxford University Press, Walton Street, Oxford OX2 6DP
Oxford New York Toronto
Delhi Bombay Calcutta Madras Karachi
Petaling Jaya Singapore Hong Kong Tokyo
Nairobi Dar es Salaam Cape Town
Melbourne Auckland
and associated companies in
Beirut Berlin Ibadan Nicosia*

Oxford is a trade mark of Oxford University Press

*Published in the United States
by Oxford University Press, New York*

© D. J. Weatherall, J. G. G. Ledingham, and D. A. Warrell 1983, 1987

*All rights reserved. No part of this publication can be reproduced,
stored in a retrieval system, or transmitted, in any form or by any means,
electronic, mechanical, photocopying, recording, or otherwise, without
the prior permission of Oxford University Press*

British Library Cataloguing in Publication Data

Oxford textbook of medicine.—2nd ed.—

(Oxford medical publications)

1. Pathology 2. Medicine

I. Weatherall, D. J. II. Ledingham, J. G. G.

III. Warrell, D. A.

616 RB111

ISBN 0-19-261551-3

Library of Congress Cataloging in Publication Data

Oxford textbook of medicine.

(Oxford medical publications)

Includes bibliographies and indexes.

1. Internal medicine. I. Weatherall, D. J.

II. Ledingham, J. G. G. III. Warrell, D. A. IV. Series.

[DNLM: 1. Medicine. WB 100 0988]

RC46.0995 1987 616 86-31161

ISBN 0-19-261551-3 (set)

*Set by Promenade Graphics Ltd, Cheltenham
Printed in Great Britain by
Butler and Tanner Ltd, Frome, Somerset.*

Preface to the second edition

The four years that have passed since the first edition of the *Oxford Textbook of Medicine* was published has been a time of mixed fortunes for clinical medicine. A series of climatic catastrophes leading to years of drought and famine, together with our continued inability to control some of the major bacterial and parasitic illnesses which afflict many of the world's populations, have highlighted the intractable problems of medical care in the Third World. A time of economic recession together with the increasing costs and complexity of medical care, and the social problems that have resulted from an unpredicted increase in the size of the elderly population, have put an immense strain on the medical services of wealthier countries. Furthermore, most of the major causes of morbidity and mortality in western societies – rheumatism, the common cancers, and degenerative vascular disorders – continue to cause problems in management. Perhaps because of this, or for other reasons, there is a prevailing mood of disillusionment with conventional medical practice and a move towards 'alternative medicine'. Yet at the same time remarkable developments have occurred in the fields of cell and molecular biology that promise to make the next decade the most exciting period so far in the development of the medical sciences. The discovery of the causative agent of AIDS, a condition which was only just recognized as the first edition was going to press and which has since reached epidemic proportions, is just one example of the remarkable power of the application of the new techniques of the basic sciences to clinical practice.

Since a major objective of this *Textbook* is to provide a more global picture of disease than is usually given in books of this type many of the changes that appear in the second edition reflect these new problems in clinical practice, both in developed and underdeveloped countries. While we are convinced that the basic principles of a sound grasp of pathophysiology, communication, history taking, and clinical examination are applicable to all branches of clinical care, regardless of where and by whom it is carried out, we have added several new sections which examine the ethical and pastoral aspects of modern medicine and the problems of primary care, both in the developed and developing countries. Some of these topics are highly controversial. For example, we do not always agree with some of the conclusions about the relationships between the basic and clinical sciences or with some of the political aspects of Third World medicine which are presented in these sections. On the other hand we believe that these subjects are of such importance that debates of this kind constitute a vital part of the thinking and training of modern-day students and physicians. In an attempt to further broaden our rather narrow north European view of clinical practice we have added to many of the major sections of the book a series of essays by practitioners in different parts of the world describing the importance

and peculiarities of the relevant diseases in their populations. We are particularly grateful to our many colleagues around the world for helping us in this way and for being so patient in the face of editorial foibles.

Though the reviewers of the first edition were remarkably kind, we are well aware of its deficiencies. Many sections have been completely rewritten and expanded and careful note has been taken of the numerous omissions ranging from AIDS to the management of hiccup. We are grateful to many of our readers who took the time and trouble to write to us to point out the errors of our ways. No textbook of this type can ever be all-embracing but we hope that this new edition will provide both students and practitioners with a reasonable account of most of the disorders that they will meet in day-to-day practice and an entrée to the rarer conditions together with a guide as to where more information can be found.

We are particularly sad to record the deaths of four of our authors, W. C. Marshall, Sister Mary Aquinas, M. Rachmilewitz, and E. G. Lee. Manny Lee was a particularly close colleague and friend, and his death at the peak of his surgical career has been a personal loss to each of us and a major tragedy for the Oxford Clinical School.

The Editors are grateful to the following persons who acted as sectional editors or advisers: Dr Roger Smith (Sections 8, 9, and 17), Dr Chris Redman (Section 11), Dr Derek Jewell (Section 12), Professor Derek Gibson (Section 13), Dr Ron Bradley (Section 14), Dr Don Lane (Section 15), Dr Terence Ryan (Section 20), Professor David Marsden (Section 21), Sir John Walton (Section 22), Mr David Spalton (Section 23), and Professor Michael Gelder (Section 25). Oxford University Press has shown its faith in this project by providing us with a full-time editor for this edition; we should like to record our thanks to the Press, and to Mairwen Lloyd-Williams for taking on this immense task and for her patience and forbearance with three increasingly irascible editors. As before, we are also particularly grateful to our secretaries Janet Watt, Judith Last, Eunice Berry, and Patchari Prakongpan for their excellent work in compiling this edition and in chasing many errant authors. The first Nuffield Professor of Clinical Medicine at Oxford, Leslie Witts, wrote that textbooks are usually written by those who have unsatisfactory marriages. We are happy to record that the marriages of the three editors have survived another edition; we are particularly grateful to our wives for their extreme forbearance and for proving that even Oxford professors are sometimes wrong.

Oxford, August 1986

D. J. WEATHERALL
J. G. G. LEDINGHAM
D. A. WARRELL

Preface to the first edition

The *Oxford Textbook of Medicine* is the reincarnation of 'Price' which, after 60 years as the major British postgraduate textbook of medicine, has been laid to rest by the Oxford University Press. The first edition of a *Textbook of the Practice of Medicine (including Sections on Diseases of the Skin and Psychological Medicine)* edited by Frederick Price was published in 1922. There were 26 contributors, all from London teaching hospitals. The book was updated roughly every four years up to the ninth edition (1957); for the tenth edition (1966) Sir Ronald Bodley Scott took over as editor. The last (twelfth) edition was published in 1978. Sir Ronald did much to modernize and expand the book during his time as editor and it is sad to record that his tragic death in an accident in 1982 prevented his seeing its successor.

When Sir Ronald Bodley Scott retired as editor of 'Price' in 1978, Oxford University Press approached us with the idea of producing a completely new textbook to replace it. This was a daunting proposal. There were several excellent American postgraduate textbooks of medicine already available and the undergraduate was well served on both sides of the Atlantic. Furthermore, although many of the reviewers of the twelfth edition of 'Price' were quite complimentary, others raised doubts about whether there was a place in the 1980s for a general textbook of medicine of its size and scope. Among the most critical reviews was a characteristically acerbic piece by J. R. A. Mitchell. After weighing the book he reminded us that dinosaurs became extinct because of their sheer bulk. 'Price' would suffer the same fate; it could not be lifted and therefore it could not be read! In addition, Professor Mitchell and other reviewers voiced the often-heard criticism that big textbooks are out of date before they are published, and suggested that smaller paperback textbooks, together with occasional forays into specialist monographs, provide the most economical and accessible guidance for students and general practitioners, while postgraduates are best served by specialist monographs and up-to-date review journals.

After considering these arguments very carefully we came to the conclusion that there is still an important role for a larger textbook of medicine. Certainly, the basic and clinical sciences are moving so fast that no textbook of medicine can hope to be absolutely up to date. However, relatively few of the advances in these fields lead to major changes in patient-care, and those that do require several years of critical evaluation before they become an integral part of routine clinical practice. Although we agree that the specialist monograph is often the best source of information in any particular area of medicine, the very breadth of the subject and the tendency to overspecialization means that few students and practitioners have immediate access to monographs on every branch of the subject, and even when they are available they are not always written by clinicians who are used to evaluating their patients in a general medical setting. Another reason for retaining at least a few broadly based textbooks of medicine is that medical practice varies very much in different parts of the world. Although it is important for students and practitioners to appreciate these differences as part of their general education, there is a more pragmatic reason for stressing this aspect of modern medicine. With increasing international travel and massive movement of refugee populations no practitioner can be sure that he will not be expected to deal with diseases with which he is unfamiliar and

which may present in a variety of unexpected ways. The steadily rising number of deaths from malaria in the United Kingdom in the last few years is just one example of this new phenomenon.

Thus we believe that the rapid expansion of knowledge, increasing specialization, and the blossoming of narrow specialist monographs have, if anything, strengthened the case for the general reference book. Therefore we have attempted to produce a reference book of internal medicine which we hope will reflect current British practice, but which also includes the views of an international group of authors. We have also tried to present some of the problems of clinical practice in the developing countries and to describe how the pattern of disease varies in different parts of the world. We have included some background chapters describing how some of the important basic clinical sciences such as microbiology, genetics, immunology, epidemiology, and oncology are contributing to an understanding of the pathogenesis of the diseases which are described in the book. With Professor Mitchell's criticisms of 'Price' in mind, we have remembered the frail and divided the book into two volumes.

For whom is this book intended? The short answer is anyone who is studying or practising clinical medicine. Our overall aim has been to provide a bird's eye view of the subject; the book is designed primarily for general practitioners and specialists as a first reference source. In addition, we hope that it will provide medical students and postgraduates with an adequate guide to the more important clinical disorders and point them in the right direction when looking up the rarities. It is an impossible task to produce a balanced reference book of general medicine first time round and we are only too aware of the shortcomings of our first effort. However, we hope that we have laid a basis on which future editions can develop a more mature and balanced view of this increasingly complicated field.

We cannot acknowledge everyone who has helped us in this enterprise. Several of the major sections were planned with a sub-editor. These are: Nutrition: Dr Roger Smith; Reproductive medicine: Dr C. W. G. Redman; Gastroenterology: Dr D. P. Jewell; Cardiology: Dr D. G. Gibson; Respiratory disease: Dr D. J. Lane; Neurology: Professor W. B. Matthews; Psychiatry: Professor M. G. Gelder. We were cajoled into this impossible task by Richard Charkin of Oxford University Press. His colleagues at the Press, particularly Alison Langton, Nicholas Dunton, and Christopher Riches have managed to see it to a conclusion despite innumerable difficulties caused by errant authors and a typesetting process which, in the best traditions of an ancient University, persisted in producing sections of the book in ancient Greek. On a more personal note we take particular pleasure in acknowledging the help of our secretaries, Janet Watt, Jenny Stephens, Jeanne Packer, Sheila Hatton, Judith Last, Jacqueline Teodorczyk, Eunice Berry, and Patchari Prakongpan. Finally, we are happy to record that the marriages of the three editors have survived the production of this book; the forbearance of our wives during its difficult gestation is the major reason for its ever seeing the light of day.

Oxford, August 1982

D. J. WEATHERALL
J. G. G. LEDINGHAM
D. A. WARRELL

List of contributors

- E. B. ADAMS, Emeritus Professor of Medicine, University of Natal, South Africa
- K. G. M. M. ALBERTI, Professor of Clinical Biochemistry, University of Newcastle upon Tyne, Royal Victoria Infirmary, Newcastle upon Tyne, UK
- M. P. ALPERS, Papua New Guinea Institute of Medical Research, Goroka, Papua New Guinea
- D. S. AMORIM, Faculdade de Medicina de Ribeirao Preta, Universidade de Sao Paulo, Brasil
- R. H. ANDERSON, Joseph Levy Professor of Paediatric Cardiac Morphology, Department of Paediatrics, Cardiothoracic Institute, University of London, Brompton Hospital, London, UK
- M. J. ANDERSON, Senior Lecturer in Medical Microbiology, University College London and the Middlesex Hospital Medical School, London, UK
- M. AQUINAS OBE (deceased), Honorary Clinical Lecturer in Medicine (Tuberculosis), University of Hong Kong
- J. K. ARONSON, Clinical Reader (Wellcome Lecturer) and Honorary Consultant in Clinical Pharmacology, MRC Unit and University Department of Clinical Pharmacology, Radcliffe Infirmary, Oxford, UK
- A. W. ASSCHER, Professor of Renal Medicine, University of Wales College of Medicine, Royal Infirmary, Cardiff, UK
- R. M. ATKINS, Clinical Lecturer in Orthopaedic Surgery, University of Oxford, Nuffield Orthopaedic Centre, Oxford, UK
- O. BADEMOSI, Professor, College of Medicine, University of Ibadan, Nigeria
- L. R. I. BAKER, Consultant Physician, Nephrologist, and Director, Smithfield Renal Unit, St Bartholomew's Hospital, London, UK
- R. BALCON, Consultant Cardiologist, The London Chest Hospital, London, UK
- P. A. J. BALL, The Wellcome Trust, London, UK
- SIR ROGER BANNISTER, Master, Pembroke College, Oxford; Honorary Consultant Neurologist, Oxford Regional Hospital Authority, Oxford, UK
- SIR RICHARD BAYLISS, KCVO, Honorary Consultant Physician and Endocrinologist, Westminster Hospital, London; Consulting Physician, King Edward VII's Hospital for Officers, London, UK
- P. B. BEESON, Emeritus Professor of Medicine, University of Washington, Seattle, USA
- D. R. BELL, Reader in Tropical Medicine, Liverpool School of Tropical Medicine, Liverpool, UK
- D. H. BENNETT, Regional Cardiac Centre, Wythenshawe Hospital, Manchester, UK
- M. K. BENSON, Consultant Physician, Chest Clinic, Churchill Hospital, Oxford, UK
- R. J. BERRY, Professor of Oncology, Middlesex Hospital Medical School, London, UK
- F. W. BESWICK, Deputy Director, Chemical Defence Establishment, Salisbury, UK
- SIR DOUGLAS BLACK, Emeritus Professor of Medicine, University of Manchester; Past President, Royal College of Physicians; Past President, British Medical Association
- E. L. BLAIR, Professor of Physiology and Head of Department of Physiological Sciences, The University, Newcastle upon Tyne, UK
- S. R. BLOOM, Professor of Endocrinology and Honorary Consultant Physician, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- B. S. BLUMBERG, Associate Director for Clinical Research, Fox Chase Cancer Center, Philadelphia; Professor of Medicine and Anthropology, University of Pennsylvania, Philadelphia, USA
- R. T. BOOTH, Professor of Occupational Health and Safety, University of Aston in Birmingham, UK
- SOMCHAI BOVORNKITTI, Professor of Medicine, Chief, Division of Respiratory Disease and Tubercules, Siriraj Hospital, Mahidol University, Bangkok, Thailand
- E. T. W. BOWEN, Acting Director, PHLS Centre for Applied Microbiology and Research, Special Pathogens Reference Laboratory, Porton Down, Salisbury, UK
- D. J. BRADLEY, Professor of Tropical Medicine, Director of the Ross Institute, and Chairman, Division of Communicable and Tropical Diseases, London School of Hygiene and Tropical Medicine, London, UK
- R. D. BRADLEY, Consultant Physician, Intensive Therapy Unit, St Thomas' Hospital, London, UK
- C. M. P. BRADSTREET, Formerly Director, Standards Laboratory for Serological Reagents, Central Public Health Laboratory, London, UK
- J. M. BRAGANZA, Senior Lecturer in Gastroenterology, Manchester Royal Infirmary, Manchester, UK
- A. M. BRECKENRIDGE, Professor of Clinical Pharmacology, University of Liverpool, UK
- V. A. BROADBENT, Senior Registrar in Paediatrics, Addenbrooke's Hospital, Cambridge, UK
- M. J. BRODIE, Consultant Clinical Pharmacologist and Honorary Clinical Lecturer, Clinical Pharmacology Unit, University Department of Medicine, Western Infirmary, Glasgow, UK
- A. D. M. BRYCESON, Consultant Physician, Hospital for Tropical Diseases, London, UK
- C. BUNCH, Clinical Reader and Honorary Consultant Physician, Nuffield Department of Clinical Medicine, University of Oxford, John Radcliffe Hospital, Oxford, UK
- DANAI BUNNAG, Director, Bangkok Hospital for Tropical Diseases; Head, Department of Clinical Tropical Medicine, Mahidol University, Bangkok, Thailand
- W. BURGDOFFER, Research Entomologist (Medical), Laboratory of Pathology, Rocky Mountain Laboratories, USA
- C. W. BURKE, Consultant Physician, Department of Endocrinology, Radcliffe Infirmary, Oxford, UK
- M. A. BYRON, Senior Registrar, Department of Rheumatology, Nuffield Orthopaedic Centre; and Fibrinolysis Research Group, John Radcliffe Hospital, Oxford, UK
- F. I. CAIRD, David Cargill Professor of Geriatric Medicine, University of Glasgow, Southern General Hospital, Glasgow, UK
- S. T. E. CALLENDER, Formerly Clinical Reader and Honorary Consultant Physician, Nuffield Department of Clinical Medicine, University of Oxford, John Radcliffe Hospital, Oxford, UK
- J. S. CAMERON, Professor of Renal Medicine, Guy's Hospital Medical School, London, UK
- D. M. CAMPBELL, Senior Lecturer in Obstetrics and Gynaecology and Reproductive Physiology, University of Aberdeen, UK

- C. C. J. CARPENTER, Chairman, Department of Medicine, Case Western Reserve University, Cleveland, Ohio, USA
- R. W. CARRELL, Professor of Haematology, University of Cambridge, Addenbrooke's Hospital, Cambridge, UK
- D. CATOVSKY, Senior Lecturer in Haematology/Medicine, Royal Postgraduate Medical School, and Medical Research Council Leukaemia Unit, Hammersmith Hospital, London, UK
- C. CHANTLER, Professor of Paediatric Nephrology, Evelina Children's Hospital, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, London, UK
- H. M. CHAPEL, Consultant Immunologist, John Radcliffe Hospital, Oxford, UK
- K. CHATTERJEE, Professor of Medicine; Luciestern Professor of Cardiology; Associate Chief, Cardiovascular Division; Director of Coronary Care Unit, University of California, School of Medicine, San Francisco, USA
- C. N. CHESTERMAN, Professor of Medicine, University of New South Wales, St George Hospital, Sydney, Australia
- S.-Y. CHO, Associate Professor of Parasitology, College of Medicine, Chung-Ang University, Korea
- A. B. CHRISTIE, Honorary Consultant, Fazakerley Hospital, Liverpool, UK
- K. M. CITRON, Consultant Physician, Brompton Hospital, London, UK
- M. L. CLARK, Consultant Physician, Hackney and St Bartholomew's Hospitals, London, UK
- M. J. CLARKSON, Professor of Farm Animal Medicine, University of Liverpool, UK
- R. D. COHEN, Professor of Medicine, London Hospital Medical College, London, UK
- G. C. COOK, Honorary Consultant Physician, University College Hospital and the Hospital for Tropical Diseases, London, UK
- A. M. COOKE, Honorary Consulting Physician to the United Oxford Hospitals; Emeritus Fellow of Merton College, Oxford, UK
- P. J. COWEN, Medical Research Council Clinical Scientist, Research Unit, Littlemore Hospital, Oxford, UK
- W. I. CRANSTON, Professor, Division of Medicine, United Medical and Dental Schools, Guy's and St Thomas's Hospitals, London, UK
- SIR JOHN CROFTON, Emeritus Professor of Respiratory Diseases, University of Edinburgh, UK
- G. W. CSONKA, Honorary Consultant Venereologist, Praed Street Clinic, and John Hunter Clinic, St Stephen's Hospital, London, UK
- SIR JOHN DACIE, Emeritus Professor of Haematology, University of London, UK
- A. G. DALGLEISH, Consultant Medical Oncologist, Northwick Park Hospital; Honorary Senior Lecturer in Oncology, Hammersmith Hospital, London, UK
- S. DAROUGAR, Professor of Public Health Ophthalmology, Head of the Subdepartment of Virology, Institute of Ophthalmology, London; Honorary Consultant, Moorfields Eye Hospital, London, UK
- J. A. DAVIES, Senior Lecturer, University Department of Medicine and Consultant Physician, The General Infirmary, Leeds, UK
- M. J. DAVIES, BHF Professor of Cardiovascular Pathology, St George's Hospital Medical School, London, UK
- M. DAVIS, Consultant Physician, Royal United Hospital, Bath, UK
- J. M. DAVISON, Member of the Scientific Staff, MRC Human Reproduction Group, Princess Mary Hospital, Newcastle upon Tyne, UK
- D. M. DENISON, Professor of Clinical Physiology, Cardiothoracic Institute, University of London, UK
- R. DICK, Consultant in Diagnostic Radiology, Royal Free Hospital, London, UK
- P. DIEPPE, Senior Lecturer in Rheumatology, University of Bristol, Bristol Infirmary, Bristol, UK
- SIR RICHARD DOLL, Emeritus Regius Professor of Medicine, University of Oxford; Honorary Consultant, Imperial Cancer Research Fund Cancer Epidemiology Unit, Radcliffe Infirmary, Oxford, UK
- B. O. L. DUKE, Chief, Filariasis Infections, Parasitic Diseases Programme, World Health Organization, Geneva, Switzerland
- K. R. DUMBELL, Emeritus Professor of Virology, University of London, UK; Consultant Virologist, Department of Medical Microbiology, University of Cape Town, South Africa
- M. S. DUNNILL, Consultant Pathologist, Histopathology Department, John Radcliffe Hospital, Oxford, UK
- R. B. DUTHIE, Nuffield Professor of Orthopaedic Surgery, University of Oxford, Nuffield Orthopaedic Centre, Oxford, UK
- M. DE SWIET, Consultant Physician, Queen Charlotte's Hospital for Women; Honorary Consultant Physician, University College Hospital and Brompton Hospital; Senior Lecturer, Cardiothoracic Institute and University College London, UK
- M. A. EASTWOOD, Consultant Physician, Gastrointestinal Unit, Western General Hospital, Edinburgh, UK
- A. L. W. F. EDDLESTON, Professor of Liver Immunology and Honorary Consultant Physician, Liver Unit, King's College Hospital, London, UK
- C. W. R. EDWARDS, Professor of Clinical Medicine, University of Edinburgh; Chairman, Department of Medicine, Western General Hospital, Edinburgh, UK
- M. ELIAKIM, Professor of Medicine, Hebrew University, Hadassah Medical School; Chairman, Department of Medicine A, Hadassah University Hospital, Jerusalem, Israel
- E. ELIAS, Consultant Physician and Honorary Senior Clinical Lecturer, Queen Elizabeth Hospital, Birmingham, UK
- T. A. H. ENGLISH, Consultant Cardiothoracic Surgeon, Papworth and Addenbrooke's Hospitals, Cambridge, UK
- D. B. EVANS, Consultant Physician and Nephrologist, Addenbrooke's Hospital, Cambridge, UK
- S. J. EYKYN, Reader in Clinical Microbiology, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, London, UK
- C. H. FANTA, Associate Physician, Brigham and Women's Hospital; Assistant Professor of Medicine, Harvard Medical School, Boston, USA
- A. FISHER, Consultant Anaesthetist and Clinical Lecturer, Intensive Care Unit, John Radcliffe Hospital, Oxford, UK
- R. A. FISHMAN, Professor and Chairman, Department of Neurology, School of Medicine, University of California, San Francisco, USA
- A. F. FLEMING, Deputy Director, Tropical Diseases Research Centre, PMB 71769, Ndola, Zambia; Formerly Professor of Haematology, Ahmadu Bello University, Zaria, Nigeria
- E. W. L. FLETCHER, Consultant Radiologist, John Radcliffe Hospital, Oxford, UK
- P. FOEX, Clinical Reader and Honorary Consultant, Nuffield Department of Anaesthetics, University of Oxford, Radcliffe Infirmary, Oxford, UK
- J. B. FOSTER, Honorary Reader in Neurology, University of Newcastle upon Tyne; Senior Neurologist, Newcastle General Hospital, UK
- G. H. FOWLER, General Practitioner, Oxford; Clinical Reader in General Practice, University Department of Community Medicine and General Practice, Radcliffe Infirmary, Oxford, UK
- D. A. G. GALTON, Professor of Haematology, University of London; Honorary Director, MRC Leukaemia Unit, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- S. D. GARDNER, Consultant Virologist, Virus Reference Laboratory, Central Public Health Laboratory, London, UK
- D. GARDNER-MEDWIN, Paediatric Neurologist, Newcastle General Hospital, Newcastle upon Tyne, UK

- D. H. GATH, Clinical Reader in Psychiatry, University Department of Psychiatry, Warneford Hospital, Oxford, UK
- K. C. GATTER, Wellcome Senior Research Fellow in Clinical Science, John Radcliffe Hospital, Oxford, UK
- D. M. GEDDES, Consultant Physician, Brompton and London Chest Hospitals, London, UK
- M. G. GELDER, Professor of Psychiatry, University of Oxford, Warneford Hospital, Oxford, UK
- G. J. GIBSON, Consultant Physician, Freeman Hospital, Newcastle upon Tyne, UK
- D. G. GIBSON, Consultant Cardiologist, National Heart and Chest Hospitals and The Brompton Hospital, London, UK
- A. GILES, Chief Medical Laboratory Scientific Officer, Department of Clinical Biochemistry, John Radcliffe Hospital, Oxford, UK
- R. W. GILLIATT, Professor of Clinical Neurology, Institute of Neurology; Honorary Consultant Neurologist, National Hospital for Nervous Diseases, London, UK
- D. J. GIRLING, Member of Scientific Staff, MRC Tuberculosis and Chest Diseases Unit, Brompton Hospital, London, UK
- D. H. GLAISTER, Consultant in Aviation Medicine, RAF Institute of Aviation Medicine, Farnborough
- M. J. GOLDACRE, Lecturer, Department of Community Medicine and General Practice, University of Oxford, Radcliffe Infirmary, Oxford, UK
- SIR ABRAHAM GOLDBERG, Regius Professor of the Practice of Medicine, The University Department of Medicine, Gardiner Institute, Western Infirmary, Glasgow, UK
- M. H. N. GOLDEN, Wellcome Senior Lecturer, AG Director, Tropical Metabolism Research Unit, University of the West Indies, Mona, Kingston, Jamaica
- L. G. GOODWIN, Formerly Director of Science, The Zoological Society of London, UK
- E. C. GORDON-SMITH, Senior Lecturer and Honorary Consultant, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- R. GOULDING, Formerly Director Poisons Unit, Guy's Hospital, London, UK
- I. W. B. GRANT, Formerly Consultant Physician, Respiratory Unit, Northern General Hospital, Edinburgh, UK
- B. M. GREENWOOD, Director, MRC Laboratories, Fajara, Banjul, The Gambia, West Africa
- D. M. GRENNAN, Consultant Physician, Hope Hospital, Salford; Senior Lecturer, Department of Rheumatology, University of Manchester, UK
- B. GRIBBIN, Consultant Cardiologist, John Radcliffe Hospital, Oxford, UK
- N. R. GRIST, Emeritus Professor of Infectious Diseases, University of Glasgow; Formerly Head, Regional Virus Laboratory, Ruchill Hospital, Glasgow, UK
- H. H. GUNSON, Director, North Western Regional Transfusion Service; Reader in Human Serology, University of Manchester, UK
- A. GUZ, Professor of Medicine, Head, Department of Medicine, Charing Cross and Westminster Medical Schools, University of London, UK
- R. HALL, Professor of Medicine, Welsh National School of Medicine, Cardiff, UK
- A. M. HALLIDAY, Consultant in Clinical Neurophysiology, National Hospital for Nervous Diseases, London; Member of the External Staff of the Medical Research Council, UK
- KHUNYING TRANAKCHIT HARINASUTA, Emeritus Professor, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand
- H. HARRIS, Regius Professor of Medicine and Head of the Sir William Dunn School of Pathology, University of Oxford, UK
- M. J. G. HARRISON, Francis and Renee Hock Director of Research, Reta Lila Weston Institute of Neurological Studies, The Middlesex Hospital Medical School, London, UK
- A. HARVEY, Senior Registrar in Rheumatology, Yorkshire Regional Health Authority, UK
- I. HASLOCK, Consultant Rheumatologist, Middlesbrough General Hospital, Middlesbrough, UK
- SANT HATHIRAT, Associate Professor of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand
- K. HAWTON, Consultant Psychiatrist, Warneford Hospital; Clinical Lecturer, University of Oxford, UK
- R. J. HAY, Consultant Dermatologist, St John's Hospital for Diseases of the Skin, London, UK
- B. L. HAZLEMAN, Associate Lecturer, Department of Medicine, University of Cambridge; Fellow of Corpus Christie College, Cambridge; Consultant Rheumatologist, Addenbrooke's Hospital, Cambridge and Newmarket Hospital; Honorary Consultant, Strangeways Research Laboratory, Cambridge, UK
- D. J. HENDRICK, Consultant Physician, Newcastle General Hospital; Honorary Lecturer in Medicine, University of Newcastle upon Tyne, UK
- T. D. R. HOCKADAY, Consultant Physician, Radcliffe Infirmary, Oxford, UK
- H. J. F. HODGSON, Senior Lecturer and Consultant Physician, Department of Medicine, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- A. V. HOFFBRAND, Professor of Haematology, Royal Free Hospital School of Medicine, London, UK
- SIR RAYMOND HOFFENBERG, Formerly Professor of Medicine, University of Birmingham; President of the Royal College of Physicians, UK
- J. M. HOPKIN, Consultant Physician, Churchill and John Radcliffe Hospitals, Oxford; Clinical Lecturer, University of Oxford, UK
- A. HOPKINS, Physician in Charge, Department of Neurological Sciences, St Bartholomew's Hospital, London, UK
- N. W. HORNE, Formerly Consultant Physician, City Hospital, Edinburgh; Senior Lecturer, Department of Respiratory Medicine, University of Edinburgh, UK
- D. F. HORROBIN, Director, Efamol Research Institute, Kentville, Nova Scotia, Canada
- M. D. HOURIHAN, Consultant Neuroradiologist, University Hospital of Wales, Cardiff, UK
- J. B. L. HOWELL, Dean and Professor of Medicine, University of Southampton, Southampton General Hospital, Southampton, UK
- T. A. HOWLETT, Lecturer in Endocrinology, St Bartholomew's Hospital, London, UK
- W. T. HUGHES, Chairman, Department of Child Science, St Jude Children's Research Hospital; Professor of Pediatrics, University of Tennessee Centre for Health Science, Memphis, USA
- G. R. V. HUGHES, Senior Lecturer in Medicine, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- R. HURLEY, Professor of Microbiology, Institute of Obstetrics and Gynaecology, University of London, Queen Charlotte's Maternity Hospital, London, UK
- M. S. R. HUTT, Emeritus Professor of Geographical Pathology, St Thomas's Hospital Medical School, London, UK
- F. E. HYTTEN, Editor, British Journal of Obstetrics and Gynaecology, Formerly Professor, Division of Perinatal Medicine, Clinical Research Centre, Harrow, UK
- I. ISHERWOOD, Professor of Diagnostic Radiology, University of Manchester, UK
- K. ISHIKAWA, Lecturer, Faculty of Medicine, Kyoto University, Kyoto, Japan
- SURAPOL ISSARAGRISIL, Associate Professor, Siriraj Hospital, Mahidol University, Bangkok, Thailand
- A. A. JACKSON, Professor of Human Nutrition, School of Biochemical and Physiological Sciences, University of Southampton, UK
- A. JACOBS, Professor of Haematology, University of Wales College of Medicine, Cardiff, UK
- W. P. T. JAMES, Professor, Director, Rowett Research Institute, Aberdeen, UK

- M. I. V. JAYSON, Professor of Rheumatology, University of Manchester, Rheumatic Diseases Centre, Hope Hospital, Salford, UK
- B. JENNETT, Professor of Neurosurgery, Institute of Neurological Sciences, Glasgow, UK
- D. P. JEWELL, Consultant Physician, John Radcliffe Hospital, Oxford, UK
- B. E. JUEL-JENSEN, Consultant Physician (Communicable Diseases), Nuffield Department of Medicine, John Radcliffe Hospital, Oxford, UK
- J. A. KANIS, Reader in Human Metabolism, Department of Human Metabolism and Clinical Biochemistry, University of Sheffield Medical School, Sheffield, UK
- T. KAWASAKI, Director, Department of Pediatrics, Japanese Red Cross Medical Center, Tokyo, Japan
- G. KAZANTZIS, Reader in Occupational Medicine, London School of Hygiene and Tropical Medicine; Honorary Consultant Physician, The Middlesex Hospital, London, UK
- W. R. KEATINGE, Professor of Physiology, London Hospital Medical College, London, UK
- D. N. S. KERR, Dean, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- R. H. KESTELOOT, Professor, Department of Cardiology, St Rafael, University Hospital, Leuven, Belgium
- M. H. KING, Senior Lecturer, Department of Community Medicine, The University of Leeds, Leeds, UK
- R. KNIGHT, Senior Lecturer, Department of Community Health, Faculty of Medicine, University of Nairobi; Parasitologist, Medical Research Centre, Kenya Medical Research Institute, Nairobi, Kenya
- W. KWANTES, Formerly Director, Public Health Laboratory, Swansea, UK
- K. S. L. LAM, Lecturer in Medicine, Department of Medicine, University of Hong Kong
- D. J. LANE, Consultant Chest Physician, Churchill Hospital, Oxford, UK
- H. E. LARSON, Member of the MRC Scientific Staff, Division of Communicable Diseases, Clinical Research Centre, Harrow, UK
- P. J. LAWTHER, Emeritus Professor of Environmental and Preventive Medicine, St Bartholomew's and London Hospital Medical College, London, UK
- N. F. LAWTON, Honorary Senior Lecturer in Neurology, University of Southampton; Consultant Neurologist, Wessex Neurological Centre, Southampton, UK
- J. G. G. LEDINGHAM, Formerly Director of Clinical Studies, May Reader in Medicine, Nuffield Department of Clinical Medicine, University of Oxford; Honorary Consultant Physician, John Radcliffe Hospital, Oxford, UK
- E. C. G. LEE (deceased), Consultant Surgeon, Department of Surgery, Radcliffe Infirmary, Oxford, UK
- G. de J. LEE, Honorary Consulting Physician, Oxford District Health Authority; Honorary Lecturer in Clinical Medicine, University of Oxford, UK
- J. P. LEFF, Assistant Director, MRC Social Psychiatry Unit, Friern Hospital, London; Reader in Social and Cultural Psychiatry, University of London, UK
- T. LEHNER, Professor of Immunology, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, London, UK
- E. A. LETSKY, Consultant Haematologist, Queen Charlotte's Hospital, London, UK
- B. LEWIS, Professor of Chemical Pathology and Metabolic Disorders, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, London, UK
- S. M. LEWIS, Reader in Haematology, Royal Postgraduate Medical School; Consultant Haematologist, Hammersmith Hospital, London, UK
- C. C. LINNEMANN Jr, Professor of Medicine, Division of Infectious Diseases, University of Cincinnati, Ohio, USA
- M. J. LIPTON, Professor of Radiology and Medicine; Chief, Cardiovascular Imaging Section, University of California, San Francisco, USA
- W. A. LISHMAN, Professor of Neuropsychiatry, Institute of Psychiatry, University of London, UK
- A. LLANOS-CUENTAS, Instituto de Medicina Tropical Alexander von Humboldt, Universidad Peruana Cayetano Heredia; and Centro de Investigacion en Salud, Instituto Nacional de Salud, Peru
- J. W. LLOYD, Director, Oxford Regional Pain Relief Unit, Oxford, UK
- D. R. LONDON, Consultant Physician, Queen Elizabeth Hospital, Birmingham; Honorary Professor of Medicine, University of Birmingham, UK
- R. G. LONG, Consultant Physician, Department of Gastroenterology, City Hospital, Nottingham, UK
- M. S. LOSOWSKY, Professor of Medicine, University of Leeds, St James Hospital, Leeds, UK
- W. S. LUNG, Consultant ENT Surgeon, Radcliffe Infirmary, Oxford, UK
- J. T. MACFARLANE, Consultant in General and Respiratory Medicine, Department of Thoracic Medicine, City Hospital, Nottingham, UK
- B. MACGILLIVRAY, Physician in Clinical Neurophysiology, Royal Free Hospital and National Hospital for Nervous Diseases, London, UK
- P. C. B. MACKINNON, Lecturer, Department of Human Anatomy, University of Oxford, UK
- D. W. R. MACKENZIE, Director, Mycological Reference Library, Central Public Health Laboratory, London, UK
- C. R. MADELEY, Professor of Clinical Virology, University of Newcastle upon Tyne, Royal Victoria Infirmary, Newcastle upon Tyne, UK
- N. S. MAIR, Formerly Honorary Reader in Microbiology, School of Medicine and School of Biological Sciences, University of Leicester, UK
- J. I. MANN, University Lecturer in Social Medicine and Honorary Consultant Physician, Department of Community Medicine and General Practice, University of Oxford, Radcliffe Infirmary and John Radcliffe Hospital, Oxford, UK
- M. G. MARMOT, Professor of Community Medicine, University College London and The Middlesex Hospital Medical School, London, UK
- C. D. MARSDEN, Professor of Clinical Neurology, King's College Hospital Medical School, London, UK
- P. D. MARSDEN, Professor of Tropical Medicine, University of Brasilia, Brazil
- F. P. MARSH, Consultant Nephrologist, The London Hospital, and Senior Lecturer in Medicine, The London Hospital Medical College, UK
- V. J. MARTLEW, Consultant Haematologist, Regional Transfusion Service, Manchester, UK
- W. C. MARSHALL (deceased), Senior Lecturer, Department of Microbiology, Institute of Child Health, University of London, UK
- D. Y. MASON, University Lecturer and Honorary Consultant, Department of Haematology, John Radcliffe Hospital, Oxford, UK
- A. D. MASON Jr, Chief Laboratory Division, US Army Institute of Surgical Research, Brooke Army Medical Center, Fort Sam Houston, USA
- V. I. MATHAN, Professor, Department of Gastroenterology, Wellcome Research Unit, Christian Medical College Hospital, Vellore, India
- W. B. MATTHEWS, Professor of Clinical Neurology, University of Oxford, Radcliffe Infirmary, Oxford, UK
- R. S. MAURICE-WILLIAMS, Consultant Neurosurgeon, Royal Free Hospital, London, UK

- R. L. MAYNARD, Superintendent Medical Division, Chemical Defence Establishment, Salisbury, UK
- R. A. MAYOU, Clinical Reader and Honorary Consultant Psychiatrist, University Department of Psychiatry, Warneford Hospital, Oxford, UK
- K. E. L. MCCOLL, Senior Lecturer in Medicine and Honorary Consultant, The University Department of Medicine, Gardiner Institute, Western Infirmary, Glasgow, UK
- N. MCINTYRE, Professor of Medicine, Royal Free Hospital and School of Medicine, London, UK
- A. J. McMICHAEL, MRC Clinical Research Professor of Immunology, John Radcliffe Hospital, Oxford, UK
- B. C. MEHTA, Professor and Head, Dr J. C. Patel Department of Hematology, Seth G. S. Medical College and K. E. M. Hospital; Honorary Hematologist, Nanavati Hospital and Research Centre; Honorary Director, Blood Research Centre, Bombay, India
- T. J. MEREDITH, Senior Registrar in Medicine, Guy's and Lewisham Hospitals, London, UK
- G. A. H. MILLER, Consultant Cardiologist and Director, Cardiac Laboratories, Brompton Hospital, London, UK
- P. R. MILLS, Associate Professor, Division of Gastroenterology, Medical College of Virginia, Richmond, USA
- F. J. MILNE, Professor of Medicine, Coronation Hospital, University of the Witwatersrand Medical School, Johannesburg, South Africa
- J. J. MISIEWICZ, Consultant Physician, Department of Gastroenterology and Nutrition, Central Middlesex Hospital, London, UK
- R. G. MITCHELL, Consultant Microbiologist, Department of Medical Microbiology, John Radcliffe Hospital, Oxford, UK
- M. MITCHESON, Consultant Psychiatrist, Formerly of the Drug Dependence Clinic, University College London, UK
- S. MIWA, Professor, Department of Internal Medicine, Institute of Medical Science, University of Tokyo, Japan
- H. LA MON, Consultant Nephrologist, Rangoon General Hospital, Rangoon, Burma
- M. A. MONNICKENDAM, Lecturer, Subdepartment of Virology, Institute of Ophthalmology, London, UK
- M. R. MOORE, Senior Lecturer in Medicine, University Department of Medicine, Gardiner Institute, Western Infirmary, Glasgow, UK
- H. G. MORGAN, Professor of Mental Health, University of Bristol, UK
- P. J. MORRIS, Nuffield Professor of Surgery, University of Oxford, John Radcliffe Hospital, Oxford, UK
- R. B. I. MORRISON, Consultant Physician, Renal Unit, Wellington Hospital, New Zealand
- A. G. MOWAT, Clinical Lecturer in Rheumatology, University of Oxford; Consultant Rheumatologist, Nuffield Orthopaedic Centre, Oxford, UK
- A. P. MOWAT, Consultant Paediatrician, Department of Child Health, King's College Hospital Medical School, London
- M. F. MUERS, Consultant Physician and Honorary Clinical Lecturer, St James's University Hospital and Killingbeck Hospital, Leeds, UK
- P. A. MURPHY, Professor of Medicine, Department of Microbiology, The Johns Hopkins University School of Medicine, Baltimore, USA
- I. M. MURRAY-LYON, Consultant Physician and Gastroenterologist, Charing Cross Hospital, London, UK
- J. NAGINGTON, Formerly Consultant Virologist, Addenbrooke's Hospital, Cambridge, UK
- K. NAKAE, Associate Professor, Department of Public Health, Dokkyo University School of Medicine, Japan; Member of the SMON Research Committee of Japan
- D. G. NATHAN, Physician-in-Chief, The Children's Hospital, Boston, and Robert A. Stranahan Professor of Paediatrics, Harvard Medical School, USA
- P. NATHAN, Honorary Consultant in Clinical Neurophysiology, National Hospital for Nervous Diseases; Honorary Consultant Neurologist, Royal National Orthopaedic Hospital; and Honorary Consultant Neurologist, City Migraine Clinic, London, UK
- G. NEALE, Consultant Physician, Addenbrooke's Hospital, Cambridge, UK
- G. H. NEILD, Senior Lecturer, Institute of Urology and Honorary Consultant Physician, St Peter's Group of Hospitals, St Philip's Hospital, London, UK
- J. M. NEUTZE, Cardiologist-in-Charge, Green Lane Hospital; Clinical Reader, School of Medicine, Auckland University, New Zealand
- C. I. NEWBOLD, University Lecturer, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, Oxford, UK
- E. A. NEWSHOLME, Fellow and Tutor in Biochemistry, Merton College, Oxford; Lecturer in Biochemistry, University of Oxford, UK
- J. NEWSOM-DAVIS, Professor of Neurology, Royal Free Hospital School of Medicine and the Institute of Neurology, London, UK
- SUCHITRA NIMMANITYA, Chief, Infectious Disease Unit, Children's Hospital, Bangkok, Thailand
- D. J. NOLAN, Consultant Radiologist, John Radcliffe Hospital, Oxford, UK
- G. NUKI, Professor of Rheumatology, University of Edinburgh; Consultant Rheumatologist, Rheumatic Diseases Unit, Northern General Hospital, Edinburgh, UK
- C. M. OAKLEY, Consultant Cardiologist, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- C. OGILVIE, Consultant Physician, Royal Liverpool Hospital, Liverpool Cardiothoracic Centre and The King Edward VIIth Hospital, Midhurst, UK
- D. O. OLIVER, Consultant Nephrologist, The Renal Unit, Churchill Hospital, Oxford, UK
- M. L'E. ORME, Professor of Pharmacology and Therapeutics, University of Liverpool, UK
- J. M. OXBURY, Consultant Neurologist, Department of Neurology, Radcliffe Infirmary, UK
- G. S. PANAYI, Professor of Rheumatology, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, London, UK
- M. T. PARKER, Formerly Director, Cross Infection Reference Laboratory, Central Public Health Laboratory, London, UK
- E. H. O. PARRY, Director, Wellcome Tropical Institute, London, UK
- D. S. PARSONS, Emeritus University Reader in Physiological Biochemistry, University of Oxford; Emeritus Professorial Fellow, Merton College, Oxford, UK
- J. R. PATTISON, Professor of Medical Microbiology, University College London and the Middlesex Hospital Medical School, London, UK
- J. PAYAN, Consultant in clinical electromyography to Guy's and King's College Hospitals and the Hospital for Sick Children, London, UK
- J. M. S. PEARCE, Consultant Neurologist, Hull Royal Infirmary, UK
- M. E. PEMBREY, Senior Lecturer, Mothercare Unit of Paediatrics, Institute of Child Health; Honorary Consultant in Clinical Genetics, The Hospital for Sick Children, Great Ormond Street, London, UK
- J. E. PENNINGTON, Associate Professor of Medicine, Harvard Medical School and Brigham and Women's Hospital, Boston, USA
- B. L. PENTECOST, Consultant Physician, United Birmingham Hospitals; Senior Clinical Lecturer, University of Birmingham, UK
- M. B. PEPYS, Professor of Immunological Medicine, MRC Acute Phase Protein Research Group, Immunological Medicine Unit, Department of Medicine, Royal Postgraduate Medical School, London, UK

- P. L. PERINE, Professor and Director, Division of Tropical Public Health, Department of Preventative Medicine/Biometrics, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA
- D. K. PETERS, Professor of Medicine, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- R. PETO, Imperial Cancer Research Fund Reader in Cancer Studies, Nuffield Department of Clinical Medicine, University of Oxford, Radcliffe Infirmary, Oxford, UK
- I. PHILLIPS, Professor of Microbiology, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, London, UK
- PRIDA PHUAPRADIT, Assistant Professor, Department of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand
- ANONG PIANKUJAGUM, Professor, Siriraj Hospital, Mahidol University, Bangkok, Thailand
- M. J. PIPPAARD, Consultant Haematologist, Northwick Park Hospital and Clinical Research Centre, Harrow, UK
- J. M. POLAK, Professor of Endocrine Pathology, Department of Histochemistry, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK
- P. A. POOLE-WILSON, Professor of Cardiology, Department of Cardiac Medicine, The Cardiothoracic Institute; Honorary Consultant Physician, National Heart Hospital, London, UK
- J. S. PORTERFIELD, Reader in Bacteriology, Sir William Dunn School of Pathology, University of Oxford, UK
- R. E. POUNDER, Reader in Medicine, Royal Free Hospital Medical School, London, UK
- F. S. PRESTON, Director, Medical Services, British Airways, London, UK
- A. B. PRICE, Consultant Histopathologist, Northwick Park Hospital, Harrow, UK
- E. W. PRICE, Formerly Research Fellow, Department of Clinical and Tropical Medicine, London School of Hygiene and Tropical Medicine, London, UK
- J. S. PRICHARD, Associate Professor of Medicine, Trinity College, Dublin; Consultant Physician, St James's Hospital, Dublin, Eire
- N. B. PRIDE, Senior Lecturer in Medicine, St Mary's Hospital and Royal Postgraduate Medical Schools, London, UK
- J. PRITCHARD, Consultant and Senior Lecturer in Paediatric Oncology, Hospital for Sick Children, Great Ormond Street, London, UK
- A. T. PROUDFOOT, Consultant Physician, Regional Poisoning Treatment Centre, Royal Infirmary, Edinburgh, UK
- B. A. PRUITT JR, Commander and Director, US Army Institute of Surgical Research, Brooke Army Medical Center, Fort Sam Houston, USA
- SOMPONNE PUNYAGUPTA, Medical Director, Vichaiyut Hospital, and Consultant Physician, Phra Mongkutklao Medical School, Vajira Municipality Hospital and Bamras Naradura Hospital for Infectious Diseases, Bangkok, Thailand
- M. RACHMILEWITZ (deceased), Professor Emeritus, Hebrew University, Hadassah Medical School, Jerusalem, Israel
- A. J. RADFORD, Professor of Primary Care and Community Medicine, Flinders Medical Centre, The Flinders University of South Australia, Australia
- B. RAJAGOPALAN, Nuffield Department of Medicine and Medical Research Council Clinical Magnetic Resonance Facility, John Radcliffe Hospital, Oxford, UK
- C. W. G. REDMAN, Lecturer in Obstetric Medicine, Nuffield Department of Obstetrics and Gynaecology, University of Oxford, John Radcliffe Hospital, Oxford, UK
- L. H. REES, Professor of Chemical Endocrinology, St Bartholomew's Hospital, London, UK
- R. S. O. REES, Consultant Radiologist, St Bartholomew's Hospital and National Heart Hospital, London, UK
- D. RENNIE, Professor of Medicine, Rush Medical College, Chicago; Chairman, Department of Medicine, West Suburban Hospital Medical Center, Oak Park, USA
- M. RIGATTO, Docent and Associate Professor of Internal Medicine, Universidade Federal do Rio Grande do Sul; Senior Researcher, National Research Council, Brazil
- A. ROMPALO, Senior Fellow, University of Washington School of Medicine, Division of Infectious Diseases, Harborview Medical Center, Seattle, USA
- B. D. ROSS, Honorary Consultant Physician, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, Oxford, UK
- R. W. ROSS RUSSELL, Physician to St Thomas's Hospital, National Hospital and Moorfield's Eye Hospital, London, UK
- D. J. ROWLANDS, Consultant Cardiologist, Manchester Area Health Authority; Lecturer in Cardiology, University of Manchester, UK
- D. RUBENSTEIN, Physician, Addenbrooke's Hospital, Cambridge; Associate Lecturer, University of Cambridge, UK
- P. RUDGE, Consultant Neurologist, The National Hospital and Northwick Park Hospital; Consultant Neurologist, Medical Research Council, Neuro-otology Unit, The National Hospital, London, UK
- T. K. RUEBUSH II, Medical Officer, Malaria Branch, Division of Parasitic Diseases, Center for Infectious Diseases, Center for Disease Control, Public Health Service, US Department of Health and Human Services, Atlanta, USA
- G. RUIZ REYES, Laboratoris Clinior de Puebla, Puebla, Peru
- G. F. M. RUSSELL, Professor of Psychiatry, Institute of Psychiatry, University of London, Bethlem Royal and Maudsley Hospitals, London, UK
- R. I. RUSSELL, Gastroenterology Unit, Royal Infirmary, Glasgow, UK
- T. J. RYAN, Consultant Dermatologist, The Slade Hospital, Oxford, UK
- L. SANCHEZ MEDAL, Fundacion de Investigaciones Sociales, Mexico City
- DAME CICELY SAUNDERS CBE, Medical Director, St Christopher's Hospital, London, UK
- J. G. SCADDING, Emeritus Professor of Medicine, University of London; Honorary Consulting Physician, Brompton Hospital and Hammersmith Hospital, London, UK
- A. SEATON, Director, Institute of Occupational Medicine, Edinburgh, UK
- J. L. SEGGIE, Senior Physician/Senior Lecturer, University of the Witwatersrand Medical School, Johannesburg, South Africa
- E. A. SHINEBOURNE, Consultant Paediatric Cardiologist, Brompton Hospital, London, UK
- J. R. SILVER, Consultant in Spinal Injuries, National Spinal Injuries Centre, Stoke Mandeville Hospital; Formerly Consultant in Charge, Liverpool Regional Paraplegic Centre and Lecturer in Surgery, Liverpool University, UK
- D. I. H. SIMPSON, Professor of Microbiology, The Queen's University of Belfast, Northern Ireland
- VISIT SITPRUA, Professor of Medicine and Associate Dean, Division of Nephrology, Department of Medicine, Chulalongkorn Hospital, Bangkok, Thailand
- M. B. SKIRROW, Consultant Microbiologist, Department of Pathology (Microbiology), Worcester Royal Infirmary, Worcester, UK
- M. P. E. SLACK, Lecturer in Bacteriology, University of Oxford; Honorary Consultant Microbiologist, John Radcliffe Hospital, Oxford, UK
- P. SLEIGHT, Field Marshall Alexander Professor of Cardiovascular Medicine, University of Oxford, Department of Cardiology, John Radcliffe Hospital, Oxford, UK
- J. C. SMITH, Consultant Urological Surgeon, Churchill Hospital, Oxford, UK
- R. SMITH, Consultant Physician and Consultant in Metabolic Medicine, John Radcliffe Hospital and Nuffield Orthopaedic Centre, Oxford, UK
- M. L. SNAITH, Consultant Rheumatologist and Honorary Senior

- Lecturer in Medicine, Faculty of Clinical Sciences, University College London, UK
- J. SOMERVILLE, Consultant Physician in Congenital Heart Disease, National Heart Hospital; Honorary Consultant Physician, Hospital for Sick Children, Great Ormond Street, London, UK
- W. SOMERVILLE CBE, Consultant Physician, Department of Cardiology, The Middlesex Hospital, London, UK
- D. J. SPALTON, Consultant Ophthalmic Surgeon and Consultant Ophthalmologist to the Medical Eye Unit, St Thomas's Hospital; Senior Lecturer in Clinical Pharmacology, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, London, UK
- S. G. SPIRO, Consultant Physician, University College Hospital, The Middlesex Hospital and Brompton Hospital, London, UK
- W. E. STAMM, Professor of Medicine, University of Washington, School of Medicine; Head, Division of Infectious Diseases, Harborview Medical Center, Seattle, USA
- G. STORES, Consultant Neuropsychiatrist, The Park Hospital for Children, Oxford, UK
- J. R. STRADLING, Wellcome Senior Research Fellow and Honorary Consultant, Osler Chest Unit, Churchill Hospital, Oxford, UK
- J. A. SUMMERFIELD, Senior Lecturer in Medicine, Department of Medicine, Royal Free Hospital School of Medicine, London, UK
- PRAVAN SUNTHARASAMAI, Associate Professor, Department of Clinical Tropical Medicine and the Hospital for Tropical Diseases, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand
- R. SUTTON, Consultant Cardiologist, Westminster Hospital, London, UK
- K. B. TAYLOR, George DeForest Barnett Professor of Medicine, Stanford University School of Medicine, California, USA
- D. TAYLOR-ROBINSON, Head, Division of Sexually Transmitted Diseases, Clinical Research Centre, Harrow, UK
- G. TEASDALE, Professor of Neurosurgery, Institute of Neurological Sciences, Southern General Hospital, Glasgow, UK
- P. J. TEDDY, Consultant Neurosurgeon, Radcliffe Infirmary, Oxford, UK
- B. TEKLU, Associate Professor of Medicine, Addis Ababa University Medical Faculty; Attending Physician, Tikur Anbessa Hospital, Addis Ababa, Ethiopia
- P. K. THOMAS, Professor of Neurology, Royal Free Hospital School of Medicine and Institute of Neurology, London, UK
- H. C. THOMAS, Professor of Medicine and Honorary Consultant Physician, Royal Free Hospital and Medical School, London, UK
- J. O'H. TOBIN, Formerly Demonstrator in Pathology, Sir William Dunn School of Pathology, University of Oxford; Honorary Consultant Virologist, John Radcliffe Hospital, Oxford, UK
- D. TODD OBE, Professor of Medicine, University of Hong Kong, Queen Mary Hospital, Hong Kong
- A. M. TOMKINS, Department of Clinical Tropical Medicine and Department of Human Nutrition, London School of Hygiene and Tropical Medicine, London, UK
- T. A. TRAILL, Assistant Professor of Medicine, The Johns Hopkins Hospital, Baltimore, USA
- J. D. TREHARNE, Senior Lecturer in Virology, Subdepartment of Virology, Institute of Ophthalmology, London, UK
- J. O. TRELLES, Emeritus Professor of Neurology, Lima, Peru
- L. TRELLES, Professor of Neurology, Lima; Head of the Neurological and Research Department, Santo Toribio Neurological Hospital, Lima, Peru
- S. C. TRUELOVE, Formerly Reader in Clinical Medicine, University of Oxford; Consultant Physician, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, Oxford, UK
- E. TUDDENHAM, Senior Lecturer in Haematology, Co-Director, Haemophilia Centre, Royal Free Hospital Medical School, London, UK
- D. C. TURK, Formerly Consultant Microbiologist, Public Health Laboratory, Northern General Hospital, Sheffield, UK
- L. A. TURNBERG, Professor of Medicine, University of Manchester; Honorary Consultant Physician, Hope Hospital, Salford, UK
- R. C. TURNER, Clinical Reader and Honorary Consultant Physician, Nuffield Department of Clinical Medicine, Radcliffe Infirmary, Oxford, UK
- M. E. H. TURNER-WARWICK, Dean and Professor of Medicine, The Cardiothoracic Institute, London, UK
- D. A. J. TYRRELL, Director, MRC Common Cold Unit, Salisbury, UK
- J. A. VALE, Director, West Midlands Poisons Unit, Birmingham; Senior Clinical Lecturer, University of Birmingham, UK
- R. I. VANHEGAN, Consultant Histopathologist, Princess Margaret Hospital, Swindon, UK
- ATHASIT VEJAJIVA, Senior Neurologist, Professor and Chairman, Department of Medicine, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand
- M. P. VESSEY, Professor of Social and Community Medicine, Department of Community Medicine and General Practice, University of Oxford, UK
- VIKIT VIRANUVATTI, Professor and Consultant, Siriraj Hospital, Mahidol University, Bangkok, Thailand
- G. N. VOLANS, Director, National Poisons Unit, New Cross Hospital, London, UK
- N. H. WADIA, Director of Neurology, Jaslok Hospital and Research Centre; Consultant Neurologist and Retired Professor of Neurology, J. J. Group of Hospitals and Grant Medical College; Visiting Neurologist, B. D. Petit Parsee General Hospital, Bombay, India
- J. A. WALKER-SMITH, Professor of Paediatric Gastroenterology, St Bartholomew's Hospital, London, UK
- J. M. WALSH, Reader in Metabolic Diseases, University of Cambridge Clinical School; Honorary Consultant Physician, Addenbrooke's Hospital, Cambridge, UK
- SIR JOHN WALTON, Warden, Green College, Oxford; Formerly Professor of Neurology, University of Newcastle upon Tyne, UK
- C. P. WARLOW, Clinical Reader in Neurology, University of Oxford, UK
- D. A. WARRELL, Formerly Director, Wellcome-Mahidol University Oxford, Tropical Medicine Research Programme, Bangkok, Thailand; Clinical Reader, Nuffield Department of Clinical Medicine, University of Oxford, and Honorary Consultant Physician, John Radcliffe Hospital, Oxford, UK
- K. S. WARREN, Director, Health Sciences Division, The Rockefeller Foundation, New York, USA
- PRAWASE WASI, Professor of Medicine, Head, Department of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand
- M. F. R. WATERS OBE, Consultant Leprologist, Hospital for Tropical Diseases, London; Member of the Medical Research Council External Scientific Staff, Middlesex Hospital, London, UK
- R. W. E. WATTS, Head, Division of Inherited Metabolic Diseases, Medical Research Council Clinical Research Centre; Consultant Physician, Northwick Park Hospital; Assistant Director (Clinical), Medical Research Council Clinical Research Centre, Harrow, UK
- D. J. WEATHERALL, Nuffield Professor of Clinical Medicine, University of Oxford, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, Oxford, UK
- A. D. B. WEBSTER, Consultant Physician, Northwick Park Hospital, Harrow, Middlesex, UK
- R. A. WEISS, Director, Institute of Cancer Research, London, UK
- N. J. WHITE, Director, Wellcome-Mahidol University, Oxford

- Tropical Medicine Research Programme, Faculty of Tropical Medicine, Bangkok, Mahidol University, Thailand
- H. C. WHITTLE, Senior Scientist, Medical Research Council Laboratories, Fajara, The Gambia
- B. WIDDOP, Consultant Biochemist, Poisons Unit, Guy's Hospital, London, UK
- D. E. L. WILCKEN, Associate Professor of Medicine, University of New South Wales, The Prince Henry Hospital, Sydney, Australia
- C. M. WILES, Consultant Neurologist, The National Hospital for Nervous Diseases and St Thomas's Hospital, London, UK
- C. B. WILLIAMS, Consultant Physician, St Mark's and St Bartholomew's Hospitals, London, UK
- D. G. WILLIAMS, Consultant Nephrologist and Senior Lecturer in Medicine, Guy's Hospital and United Medical and Dental Schools of Guy's and St Thomas's Hospitals, London, UK
- E. WILLIAMS, Consultant Physician, Withybush General Hospital, Haverfordwest, UK
- R. WILLIAMS, Consultant Physician and Director, Liver Unit, King's College Hospital, London, UK
- S. J. WILLIAMS, Consultant Physician, Chest Department, Stoke Mandeville Hospital, Aylesbury, UK
- D. H. WILLIAMSON, Member of the Medical Research Council External Scientific Staff, Metabolic Research Laboratories, Radcliffe Infirmary, Oxford, UK
- KYAW WIN, Lt Col., Burma Army Medical Corps; Consultant Physician, No. 2, Military Hospital, Rangoon, Burma
- A. J. WING, Consultant Physician, St Thomas's Hospital, London, UK
- D. L. WINGATE, Reader in Gastroenterology, University of London; Director, Gastrointestinal Science Research Unit, London Hospital Medical College; Honorary Consultant Gastroenterologist, The London Hospital, Whitechapel, London, UK
- H. F. WOODS, Professor of Therapeutics, University of Sheffield, The Royal Hallamshire Hospital, Sheffield, UK
- T. E. WOODWARD, Emeritus Professor of Medicine, University of Maryland School of Medicine and Hospital Veterans Administration Medical Center, Baltimore, USA
- A. J. WOOLCOCK, Professor of Respiratory Medicine, University of Sydney, New South Wales, Australia
- K. G. WORMSLEY, Consultant Physician, Ninewells Hospital, Dundee, UK
- F. W. WRIGHT, Consultant Radiologist, Clinical Lecturer in Radiology, Department of Radiology, Churchill Hospital, Oxford, UK
- R. WRIGHT, Professor of Medicine, University of Southampton Medical School and Medical Unit; Honorary Consultant Physician, Southampton General Hospital, Southampton, UK
- S. G. WRIGHT, Associate Professor, Department of Medicine, College of Medicine, King Saud University, Riyadh, Saudi Arabia
- V. WRIGHT, Professor of Rheumatology, University of Leeds; Consultant Physician in Rheumatology, Leeds Western District Health Authority and Yorkshire Regional Health Authority, UK
- V. M. WRIGHT, Consultant Paediatric Surgeon, Queen Elizabeth Hospital for Children, London, UK
- MARIA A. WYKE, Senior Lecturer in Neuropsychology, Institute of Psychiatry, London, UK
- R. T. T. YEUNG, Professor of Medicine, Department of Medicine, University of Hong Kong
- A. YOUNG, Consultant Physician in Geriatric Medicine, Royal Free Hospital, London, UK
- V. ZAMAN, Professor of Parasitology, Faculty of Medicine, University of Singapore
- A. J. ZUCKERMAN, Professor of Microbiology, University of London; Director of the Department of Medical Microbiology and of the World Health Organization Collaborating Centre for Reference and Research on Viral Hepatitis, London School of Hygiene and Tropical Medicine; Honorary Consultant in Medical Microbiology

Contents

List of Contributors	xvii		
SECTION 1. On textbooks of medicine			
<i>A. M. Cooke</i>	1.1		
SECTION 2. On modern scientific medicine			
Scientific medicine – success or failure? <i>D. F. Horrobin</i>	2.1		
Medical ethics <i>D. A. K. Black</i>	2.4		
SECTION 3. The spectrum of disease and clinical practice			
Medicine in an unjust world <i>M. H. King</i>	3.1		
Health and sickness in the community <i>M. J. Goldacre and M. P. Vessey</i>	3.10		
Primary health care <i>G. H. Fowler</i>	3.17		
Primary health care in a developing country <i>P. Wasi</i>	3.23		
SECTION 4. Genetics, immunology, and neoplasia			
Genetic factors in disease <i>M. E. Pembrey</i>	4.1		
Molecular biology and clinical medicine <i>D. J. Weatherall</i>	4.40		
Immune mechanisms in health and disease			
Principles of immunology <i>A. J. McMichael</i>	4.47		
Abnormalities of the immune response <i>H. M. Chapel</i>	4.60		
Immune deficiency <i>A. D. B. Webster</i>	4.75		
Principles of transplantation immunology <i>P. J. Morris</i>	4.83		
Neoplasia			
General characteristics of neoplasia <i>H. Harris</i>	4.88		
Epidemiology of cancer <i>R. Doll and R. Peto</i>	4.95		
Prevention of cancer <i>R. Doll and R. Peto</i>	4.123		
Medical aspects of neoplasia <i>D. A. G. Galton</i>	4.125		
SECTION 5. Infections			
The host's response to infection <i>B. M. Greenwood</i>	5.1		
Epidemiology and public health <i>A. B. Christie</i>	5.13		
Physiological changes in infected patients <i>P. A. Murphy</i>	5.20		
The biology and classification of pathogenic viruses, bacteria, fungi, and parasites <i>D. A. J. Tyrrell</i>	5.26		
Antimicrobial chemotherapy <i>M. P. E. Slack</i>	5.35		
Viruses			
Respiratory viruses <i>J. Nagington and D. Rubenstein</i>	5.53		
The herpesviruses <i>B. E. Juel-Jensen</i>	5.59		
Varicella-zoster virus infections: chicken pox and zoster <i>B. E. Juel-Jensen</i>	5.67		
Infectious mononucleosis: Epstein-Barr virus disease <i>B. E. Juel-Jensen</i>	5.72		
Infections caused by simian herpesviruses <i>B. E. Juel-Jensen</i>	5.75		
Cytomegalovirus infection <i>J. O'H. Tobin</i>		5.76	
Poxviruses <i>K. R. Dumbell</i>		5.80	
Orf <i>B. E. Juel-Jensen</i>		5.83	
Molluscum contagiosum <i>B. E. Juel-Jensen</i>		5.84	
Paramyxoviruses			
Mumps: epidemic parotitis <i>A. B. Christie</i>		5.85	
Measles <i>H. C. Whittle and W. C. Marshall</i>		5.89	
Enteroviruses <i>N. R. Grist</i>		5.93	
Viruses, diarrhoea, and vomiting <i>C. R. Madeley</i>		5.102	
Rhabdoviruses: rabies and rabies-related viruses <i>D. A. Warrell</i>		5.105	
Orbiviruses: Colorado tick fever <i>D. A. Warrell</i>		5.114	
Togaviridae			
Alphaviruses <i>D. I. H. Simpson</i>		5.114	
Rubella <i>J. O'H. Tobin</i>		5.117	
Flaviviruses <i>D. I. H. Simpson</i>		5.120	
Dengue haemorrhagic fever <i>S. Nimmannitya</i>		5.124	
Bunyaviridae <i>J. S. Porterfield</i>		5.125	
Arenaviruses <i>D. I. H. Simpson and E. T. W. Bowen</i>		5.134	
Hepatitis viruses <i>A. J. Zuckerman</i>		5.139	
Tumour viruses <i>R. A. Weiss</i>		5.146	
Retroviruses in human disease <i>R. A. Weiss and A. G. Dalgleish</i>		5.151	
Marburg and Ebola fevers <i>E. T. W. Bowen and D. I. H. Simpson</i>		5.155	
Transmissible slow virus encephalopathies (kuru) <i>M. P. Alpers</i>		5.158	
Papovaviruses <i>S. D. Gardner</i>		5.160	
Parvoviruses <i>M. J. Anderson and J. R. Pattison</i>		5.162	
Bacteria			
Diphtheria <i>A. B. Christie</i>		5.164	
Pathogenic streptococci <i>M. T. Parker</i>		5.168	
Pneumococcal infection <i>B. M. Greenwood</i>		5.182	
Staphylococci <i>I. Phillips and S. J. Eykyn</i>		5.191	
Meningococcal infection <i>B. M. Greenwood</i>		5.199	
Enterobacteria and miscellaneous enteropathogenic and food-poisoning bacteria <i>M. B. Skirrow</i>		5.208	
Typhoid and paratyphoid fevers <i>E. B. Adams</i>		5.218	
Anaerobic bacteria <i>S. J. Eykyn and I. Phillips</i>		5.224	
Cholera <i>C. C. J. Carpenter</i>		5.231	
Haemophilus <i>D. C. Turk</i>		5.234	
Bordetella <i>C. C. Linnemann Jr</i>		5.239	
Tularaemia, glanders, and melioidosis <i>R. G. Mitchell</i>		5.242	
Plague <i>A. B. Christie</i>		5.246	
Yersiniosis and Pasteurellosis <i>N. S. Mair</i>		5.251	
Anthrax <i>A. B. Christie</i>		5.255	
Brucellosis <i>E. Williams</i>		5.259	
Tetanus <i>E. B. Adams</i>		5.265	
Botulism, gas gangrene, and Clostridial gastrointestinal infections <i>H. E. Larson</i>		5.270	
Tuberculosis <i>K. M. Citron and D. J. Girling</i>		5.278	
Particular problems of tuberculosis in developing countries <i>M. Aquinas and D. Todd</i>		5.299	
Diseases caused by non-tuberculous mycobacteria <i>K. M. Citron and D. J. Girling</i>		5.303	
Leprosy (Hansen's disease. Hanseniasis) <i>M. F. R. Waters</i>		5.305	
<i>Mycobacterium ulcerans</i> infection <i>M. F. R. Waters</i>		5.314	

Actinomycosis <i>R. G. Mitchell</i>	5.315	Toxocara and visceral larva migrans <i>D. R. Bell and M. J. Clarkson</i>	5.553
Nocardiosis <i>R. G. Mitchell</i>	5.317	Angiostrongyliasis <i>S. Punyagupta</i>	5.555
Spirochaetes		Gnathostomiasis <i>P. Suntharasamai</i>	5.558
Rat bite fevers <i>D. A. Warrell</i>	5.319	Cestodes	
Borrelia infections <i>D. A. Warrell</i>	5.320	Hydatid disease <i>A. J. Radford</i>	5.561
Lyme disease <i>W. Burgdorfer</i>	5.324	Gut cestodes <i>V. Zaman</i>	5.566
Leptospirosis <i>V. Sitprija</i>	5.327	Diphyllobothriasis and sparganosis <i>S. Y. Cho</i>	5.569
Non-venereal treponemes: yaws, endemic syphilis, and pinta <i>P. L. Perine</i>	5.331	Trematodes	
Listeria <i>R. Hurley</i>	5.335	Schistosomiasis <i>K. S. Warren</i>	5.571
Legionnaires' disease <i>J. O'H. Tobin</i>	5.337	Liver fluke diseases of humans <i>T. Harinasuta and D. Bunnag</i>	5.577
Rickettsial diseases <i>T. E. Woodward</i>	5.341	Lung flukes (paragonimiasis) <i>T. Harinasuta, D. Bunnag, and D. A. Warrell</i>	5.586
Scrub typhus fever and sennetsu rickettsiosis <i>Kyaw Win</i>	5.353	Intestinal trematodiasis <i>T. Harinasuta and D. Bunnag</i>	5.589
Chlamydial infections <i>S. Darougar, M. A. Monnickendam, and J. D. Treharne</i>	5.355	Lesser known nematodes causing infection in humans	
Mycoplasmas <i>D. Taylor-Robinson</i>	5.366	<i>V. Zaman</i>	5.592
Bartonellosis <i>E. A. Llanos-Cuentas and D. A. Warrell</i>	5.373	Non-venomous arthropods <i>A. J. Radford</i>	5.595
'Newer' and lesser known bacteria causing infection in humans <i>R. G. Mitchell</i>	5.376	Pentastomiasis (porocephalosis) <i>D. A. Warrell</i>	5.603
Sexually transmitted infections		Infectious disease syndromes	
Syphilis <i>G. W. Csonka</i>	5.386	Pyrexia of uncertain origin <i>P. B. Beeson</i>	5.605
Granuloma inguinale (donovanosis) <i>P. L. Perine</i>	5.403	Septicaemia <i>P. A. Murphy</i>	5.608
Chancroid <i>P. L. Perine</i>	5.405	Infection in the compromised host <i>C. Bunch</i>	5.614
Lymphogranuloma venereum <i>P. L. Perine</i>	5.407	Possible infectious diseases	
Gonorrhoea <i>G. W. Csonka</i>	5.409	Sarcoidosis <i>J. G. Scadding</i>	5.623
Genital candidiasis <i>G. W. Csonka</i>	5.415	Whipple's disease <i>H. J. F. Hodgson</i>	5.636
Genital warts <i>G. W. Csonka</i>	5.417	Cat scratch disease <i>C. M. P. Bradstreet and D. A. Warrell</i>	5.637
Clinical approach to non-gonococcal urethritis <i>G. W. Csonka</i>	5.419	Benign myalgic encephalomyelitis <i>W. B. Matthews</i>	5.639
Clinical approach to pelvic inflammatory disease <i>G. W. Csonka</i>	5.422		
Venereologists' approach to Reiter's disease <i>G. W. Csonka</i>	5.426		
Venereologists' approach to herpes simplex infection <i>G. W. Csonka</i>	5.432		
Epididymitis <i>G. W. Csonka</i>	5.434		
Infections in homosexual men <i>W. E. Stamm and A. Rompalo</i>	5.435		
Bacterial vaginosis (<i>Gardnerella vaginalis</i> vaginitis) <i>G. W. Csonka</i>	5.445		
Fungal infections (Mycoses) <i>R. J. Hay and D. W. R. MacKenzie</i>	5.447		
Protozoa			
Amoebic infections <i>R. Knight</i>	5.466		
Malaria <i>D. J. Bradley, C. I. Newbold, and D. A. Warrell</i>	5.474		
Babesia <i>T. K. Ruebush II</i>	5.502		
<i>Pneumocystis carinii</i> <i>W. T. Hughes</i>	5.504		
Toxoplasmosis <i>W. Kwantes</i>	5.506		
Cryptosporidiosis, sarcocystosis, isosporiasis, and rare protozoal infections <i>V. Zaman</i>	5.509		
Giardiasis and balantidiasis <i>S. G. Wright</i>	5.512		
<i>Blastocystis hominis</i> <i>D. A. Warrell</i>	5.514		
African trypanosomiasis <i>B. M. Greenwood</i>	5.515		
American trypanosomiasis			
Chagas' disease <i>P. D. Marsden</i>	5.520		
<i>Trypanosoma rangeli</i> <i>P. D. Marsden</i>	5.524		
Leishmaniasis <i>A. D. M. Bryceson</i>	5.524		
Trichomoniasis <i>G. W. Csonka</i>	5.532		
Nematodes			
Filarial infections and diseases <i>B. O. L. Duke</i>	5.533		
Guinea worm disease (dracunculiasis or dracontiasis) <i>B. O. L. Duke</i>	5.543		
Hookworm and strongyloides <i>P. A. J. Ball</i>	5.544		
Pathogenic, free-living nematodes (order Rhabditida) <i>D. A. Warrell</i>	5.548		
Other gut nematodes <i>V. Zaman</i>	5.548		
		SECTION 6. Chemical and physical injuries, climatic and occupational diseases	
		Poisoning with drugs and chemical substances	
		Introduction and epidemiology <i>R. Goulding, J. A. Vale, and T. J. Meredith</i>	6.1
		General principles in the management of acute poisoning <i>G. N. Volans and A. T. Proudfoot</i>	6.2
		The role of the laboratory in acute poisoning <i>G. N. Volans and B. Widdop</i>	6.8
		Poisoning from chemicals <i>R. Goulding</i>	6.9
		Poisoning from metals <i>G. Kazantzis</i>	6.14
		Poisoning from household products <i>R. Goulding</i>	6.16
		Poisoning caused by analgesic drugs <i>T. J. Meredith, J. A. Vale, and A. T. Proudfoot</i>	6.18
		Poisoning from antidepressants, hypnotics, antihistamines, and anticonvulsants <i>A. T. Proudfoot, T. J. Meredith, and J. A. Vale</i>	6.24
		Poisoning from cardiovascular drugs <i>T. J. Meredith, J. A. Vale, and A. T. Proudfoot</i>	6.31
		Poisoning caused by respiratory drugs <i>J. A. Vale, T. J. Meredith, and A. T. Proudfoot</i>	6.36
		Poisoning caused by drugs acting on the gastrointestinal system <i>J. A. Vale, T. J. Meredith, and A. T. Proudfoot</i>	6.37
		Poisoning by haematinics <i>A. T. Proudfoot and J. A. Vale</i>	6.38
		Poisoning from miscellaneous drugs <i>T. J. Meredith and J. A. Vale</i>	6.39
		Poisoning by alcohols and glycols <i>J. A. Vale, T. J. Meredith, and A. T. Proudfoot</i>	6.41
		Poisoning from hydrocarbons <i>J. A. Vale, T. J. Meredith, and A. T. Proudfoot</i>	6.44
		Poisoning caused by inhalation agents <i>T. J. Meredith, J. A. Vale, and A. T. Proudfoot</i>	6.53
		Poisoning in conflict <i>F. W. Beswick and R. L. Maynard</i>	6.59

Venoms and toxins of animals and plants

Injuries, envenoming, poisoning, and allergic reactions caused by animals *D. A. Warrell* 6.66

Poisonous plants and fungi *L. G. Goodwin* 6.85

Environmental extremes

Heat *W. R. Keatinge* 6.92

Drug-induced increases of body temperature

W. I. Cranston 6.93

Cold and drowning *W. R. Keatinge* 6.94

Diseases of high terrestrial altitudes *D. Rennie* 6.99

Aerospace medicine *F. S. Preston* and *D. M. Denison* 6.106

Diving medicine *D. M. Denison* 6.120

Lightning and electric shock *B. A. Pruitt* and

A. D. Mason 6.126

Radiation *R. J. Berry* 6.130

Noise *D. H. Glaister* 6.135

Air pollution *P. J. Lawther* 6.137

Occupational health

Occupational diseases *G. Kazantzis* 6.143

Accident prevention *R. T. Booth* 6.161

Podoconiosis (non-filarial endemic elephantiasis of the lower legs) *E. W. Price* 6.165

SECTION 7. Principles of pharmacology and therapeutics *A. M. Breckenridge* and *M. L'E. Orme* 7.1**SECTION 8. Nutrition**

Introduction *R. Smith* and *W. P. T. James* 8.1

Biochemical background *R. Smith* and *D. H. Williamson* 8.4

Severe malnutrition *A. A. Jackson* and *M. H. N. Golden* 8.12

Anorexia nervosa *G. F. M. Russell* 8.29

Metabolic effects of anorexia *J. G. G. Ledingham* 8.33

Obesity *W. P. T. James* 8.35

Special nutritional problems *R. Smith* 8.51

Diseases of overnourished societies and the need for dietary change *J. I. Mann* 8.58

SECTION 9. Metabolic disorders

Inborn errors of metabolism: general aspects

R. W. E. Watts 9.1

Inborn errors of carbohydrate metabolism

R. W. E. Watts 9.4

Inborn errors of fructose metabolism *H. F. Woods* 9.9

Inborn errors of amino acid and organic acid metabolism

R. W. E. Watts 9.11

Amino acid transport defects *R. W. E. Watts* 9.27

Lysosomal storage diseases *R. W. E. Watts* 9.31

Primary hyperoxaluria *R. W. E. Watts* 9.41

Acatlasia *R. W. E. Watts* 9.43

α_1 -Antitrypsin deficiency *R. W. Carrell* 9.44

Wilson's disease (hepatolenticular degeneration)

J. M. Walshe 9.47

Diabetes mellitus *T. D. R. Hockaday* and

K. G. M. M. Alberti 9.51

Hypoglycaemia *R. C. Turner* 9.102

Disorders of lipid transport *B. Lewis* 9.108

Disorders of purine metabolism *G. Nuki* 9.123

Porphyrin metabolism and the porphyrias *A. Goldberg,*

M. R. Moore, K. E. L. McColl, and M. J. Brodie 9.136

Amyloidosis *M. B. Pepys* 9.145

The acute phase response and C-reactive protein

M. B. Pepys 9.157

Disturbances of acid-base homeostasis *R. Cohen* and

H. F. Woods 9.164

Metabolism and exercise *E. A. Newsholme* 9.175

Metabolic effects of accidental injury and surgery

R. Smith 9.180

SECTION 10. Endocrine disorders

Introduction *P. C. B. MacKinnon* 10.1

Pituitary and hypothalamic disorders *R. Hall* 10.7

Thyroid disorders *R. Hoffenberg* 10.30

Thyroid disorders in the Far East *R. T. T. Young* and

K. S. L. Lam 10.48

Disorders of calcium metabolism *J. A. Kanis* 10.51

Adrenocortical diseases *C. W. Burke* 10.69

Disorders of the reproductive systems

The female *D. R. London* 10.84

The male *D. R. London* 10.95

Intersex *D. R. London* 10.105

Puberty *D. R. London* 10.106

The breast *D. R. London* 10.108

Endogenous opioid peptides *T. A. Howlett* and

L. H. Rees 10.111

Endocrine manifestations of non-endocrine disease

R. I. S. Bayliss 10.117

SECTION 11. Reproductive medicine

Benefits and risks of oral contraceptives *M. P. Vessey* 11.1

Hypertension in pregnancy *C. W. G. Redman* 11.4

Renal disease in pregnancy *G. W. G. Redman* and

J. G. G. Ledingham 11.9

Systemic lupus erythematosus and related disorders in

pregnancy *C. W. G. Redman* and *M. Byron* 11.10

Heart disease in pregnancy *C. W. G. Redman* and

P. Sleight 11.12

Thromboembolism in pregnancy *M. de Swiet* 11.14

Endocrine disorders in pregnancy *C. W. G. Redman* and

R. Hall 11.17

Diabetes in pregnancy *C. W. G. Redman* and

T. D. R. Hockaday 11.21

Chest diseases in pregnancy *M. de Swiet* 11.27

Blood disorders in pregnancy *E. A. Letsky* and

C. W. G. Redman 11.31

Neurological disorders and pregnancy *C. M. Wiles* and

C. W. G. Redman 11.35

Nutrition in pregnancy *D. M. Campbell* and *F. E. Hytten* 11.40

Infection in pregnancy *R. Hurley* 11.44

Prescribing in pregnancy *N. J. White* 11.51

SECTION 12. Gastroenterology

Introduction *D. P. Jewell* 12.1

Methods for investigation of gastrointestinal diseases

Endoscopy *D. P. Jewell* 12.1

Radiology *D. J. Nolan* and *E. W. Fletcher* 12.2

Computerized tomography *R. Dick* 12.7

Liver biopsy <i>R. Wright</i>	12.9		
Pancreatic function tests <i>J. M. Bruganza</i>	12.12		
Symptomatology of gastrointestinal disease			
Introduction <i>D. P. Jewell</i>	12.15		
Disorders of swallowing <i>D. P. Jewell</i>	12.15		
Vomiting <i>D. P. Jewell</i>	12.16		
Abdominal pain <i>D. P. Jewell</i>	12.17		
Diarrhoea <i>L. A. Turnberg</i>	12.18		
Constipation <i>D. P. Jewell</i>	12.20		
Gastrointestinal bleeding <i>D. P. Jewell</i>	12.21		
The mouth and salivary glands <i>T. Lehner</i>	12.23		
Disorders of motility <i>D. L. Wingate</i>	12.37		
Hormones and the gastrointestinal tract <i>S. R. Bloom, R. G. Long and J. M. Polak</i>	12.52		
The regulation of gastric secretion in humans <i>E. L. Blair</i>	12.61		
Peptic ulcer <i>J. J. Misiewicz and R. E. Pounder</i>	12.64		
Gastritis <i>K. B. Taylor</i>	12.77		
Immune disorders <i>A. D. B. Webster</i>	12.87		
Mechanisms of absorption <i>D. S. Parsons</i>	12.92		
Malabsorption <i>M. S. Losowsky</i>	12.98		
Postinfective malabsorption (including 'tropical sprue') <i>G. C. Cook</i>	12.115		
Crohn's disease <i>D. P. Jewell</i>	12.121		
Ulcerative colitis <i>S. C. Truelove</i>	12.126		
Diverticular disease <i>M. A. Eastwood</i>	12.133		
Congenital abnormalities of the gastrointestinal tract <i>V. M. Wright and J. A. Walker-Smith</i>	12.137		
Tumours of the gastrointestinal tract <i>M. L. Clark, A. B. Price, and C. B. Williams</i>	12.146		
Vascular and collagen disorders <i>G. Neale</i>	12.158		
Infections of the gastrointestinal tract <i>A. M. Tomkins</i>	12.164		
The appendix, peritoneum, and omentum <i>E. C. G. Lee</i>	12.178		
Diseases of the pancreas <i>K. G. Wormsley</i>	12.183		
Diseases of the gall bladder and biliary tree <i>J. A. Summerfield</i>	12.198		
Jaundice <i>E. Elias</i>	12.206		
Acute hepatitis and fulminant hepatic failure <i>A. L. W. F. Eddleston</i>	12.213		
Chronic hepatitis <i>H. C. Thomas</i>	12.221		
Cirrhosis of the liver <i>R. Wright</i>	12.227		
Primary biliary cirrhosis <i>R. Wright</i>	12.233		
Portal systemic encephalopathy <i>R. Wright</i>	12.235		
Ascites and portal hypertension <i>N. McIntyre</i>	12.236		
Alcoholic liver disease <i>R. Wright</i>	12.245		
Drugs and liver damage <i>M. Davis</i>	12.248		
Hepatic granulomas <i>P. R. Mills and R. I. Russell</i>	12.253		
Liver tumours <i>I. M. Murray-Lyon</i>	12.256		
Infections of the liver <i>S. G. Wright</i>	12.260		
Liver disorders in infancy and childhood <i>A. P. Mowat</i>	12.263		
Liver transplantation <i>R. Williams</i>	12.268		
Miscellaneous disorders of the gastrointestinal tract and liver <i>D. P. Jewell</i>	12.271		
Geographical variation in gastrointestinal disease			
Hepatitis B virus and primary cancer of the liver <i>B. S. Blumberg</i>	12.276		
India <i>V. I. Mathan</i>	12.278		
Southeast Asia <i>V. Viranuvatti</i>	12.279		
Africa <i>G. Cook</i>	12.281		
		SECTION 13. Cardiovascular disease	
		Physiological considerations	
		Biochemistry and cellular physiology of heart muscle and membranes <i>P. A. Poole-Wilson</i>	13.1
		Clinical physiology of the normal heart <i>D. E. L. Wilcken</i>	13.7
		Clinical assessment of cardiac function	
		The chest X-ray in heart disease <i>R. S. O. Rees</i>	13.16
		The electrocardiogram <i>D. J. Rowlands</i>	13.21
		Echocardiography <i>D. G. Gibson</i>	13.34
		Nuclear techniques <i>D. J. Rowlands</i>	13.41
		Magnetic resonance imaging and spectroscopy <i>B. Rajagopalan</i>	13.47
		Cardiac catheterization <i>G. A. H. Miller</i>	13.49
		Phonocardiography and mechanocardiography <i>H. Kesteloot</i>	13.53
		Computerized tomographic scanning of the heart <i>M. J. Lipton</i>	13.60
		Symptoms of heart disease	
		Dyspnoea <i>A. Guz</i>	13.74
		Chest pain <i>W. Somerville</i>	13.76
		Oedema <i>J. G. G. Ledingham</i>	13.81
		Heart failure	
		Heart failure: ventricular disease <i>D. G. Gibson</i>	13.84
		Treatment	
		Diuretics <i>J. G. G. Ledingham</i>	13.98
		Digitalis <i>J. K. Aronson</i>	13.101
		Vasolidators <i>K. Chatterjee</i>	13.105
		Catecholamines and their derivatives <i>P. Foëx and A. Fisher</i>	13.111
		Cardiac transplantation <i>T. A. H. English</i>	13.115
		Cardiac arrhythmias <i>D. H. Bennett</i>	13.117
		Antiarrhythmic drugs <i>D. H. Bennett</i>	13.132
		Pacemakers <i>R. Sutton</i>	13.136
		Atheroma: vessel wall and thrombosis <i>C. N. Chesterman</i>	13.138
		Ischaemic heart disease	
		Epidemiology of ischaemic heart disease <i>J. I. Mann and M. G. Marmot</i>	13.143
		Pathology of ischaemic heart disease <i>M. J. Davies</i>	13.154
		Detection of ischaemic heart disease <i>R. Balcon</i>	13.156
		Myocardial infarction <i>B. L. Pentecost</i>	13.167
		Peripheral arterial disease <i>P. J. Morris</i>	13.182
		Takayasu's disease <i>K. Ishikawa</i>	13.193
		Specific heart muscle disorders <i>C. M. Oakley</i>	13.196
		The cardiomyopathies <i>C. M. Oakley</i>	13.209
		Chagas' heart disease <i>D. S. Amorim</i>	13.230
		Congenital heart disease	
		The anatomy of congenital heart disease <i>R. H. Anderson and E. A. Shinebourne</i>	13.233
		Congenital heart disease in adults <i>J. Somerville</i>	13.246
		Rheumatic fever <i>J. M. Neutze</i>	13.277
		Valve disease <i>D. G. Gibson</i>	13.281
		Pericardial disease <i>D. G. Gibson</i>	13.304
		Left atrial myxoma <i>T. A. Traill</i>	13.312
		Infective endocarditis <i>B. Gribbin</i>	13.314
		Cardiovascular syphilis <i>B. Gribbin</i>	13.325
		The pulmonary circulation	
		In health and disease <i>J. S. Prichard and G. de J. Lee</i>	13.326
		Pulmonary oedema <i>J. S. Prichard and G. de J. Lee</i>	13.334
		Pulmonary hypertension <i>G. de J. Lee</i>	13.342
		Cor pulmonale <i>J. S. Prichard</i>	13.350
		Pulmonary embolism <i>G. A. H. Miller</i>	13.355