

The  
Wellcome Trust  
1980-82

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Fourteenth Report



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THE RT. HON. LORD FRANKS, O.M., G.C.M.G., K.C.B., C.B.E., P.C., D.L., F.B.A.,  
CHAIRMAN OF THE TRUST (1965-1982)

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## **The Wellcome Trust**

### *Board of Trustees:*

#### *Chairman:*

The Rt. Hon. the Lord Franks, OM, GCMG, KCB, CBE, PC, DL, FBA  
(until February 1982)  
Sir David Steel, DSO, MC, TD  
(from March 1982; Trustee from December 1981)

#### *Deputy Chairman:*

Professor R. H. S. Thompson, CBE, DM, DSc, FRCPath, FRS  
(until August 1982)  
C. E. Gordon Smith, CB, MD, FRCP, FRCPath  
(from September 1982)

#### *Trustees:*

The Rt. Hon. the Lord Swann, FRS  
Professor W. S. Peart, MD, FRCP, FRS  
Professor Sir William Paton, CBE, DM, FRCP, FRS  
Dr. J. Helen M. Muir, CBE, MA, DPhil, DSc, FRS  
(from September 1982)

#### *Director:*

P. O. Williams, MA, MB, FRCP

#### *Deputy Director:*

Edda Hanington, MD, MRCP

#### *Assistant Director:*

Bridget M. Ogilvie, ScD, PhD

## **The Wellcome Trust**

### *Staff of the Trust (as at 31st August 1982)*

#### *Director:*

P. O. Williams, MA, MB, FRCP

#### *Medical Division:*

Edda Hanington, MD, MRCP, Deputy Director  
B. A. Bembridge, MD, Assistant Director  
C. Harold Edwards, MD, FRCP, Co-ordinator of Special Programmes  
D. G. Metcalfe, Head of Grants Administration  
Anne Edwards, Assistant Administrative Officer  
Siân M. Spry, Administrative Assistant

#### *Tropical Medicine Division:*

Bridget M. Ogilvie, ScD, PhD, Assistant Director  
C. D. J. Sainty, BA(Econ), Assistant Administrative Officer

#### *Veterinary Medicine Division:*

K. B. Sinclair, DVSc, PhD, FRCVS, Assistant Director

#### *History of Medicine Division:*

Professor A. Rupert Hall, LittD, FBA, Co-ordinator of History of Medicine Programme  
Rosemary Tilden, Assistant Administrative Officer

#### *Finance Division:*

K. C. Stephenson, MC, FCA, Financial Controller  
D. L. Freeman, Accountant  
Betty Hardy, Assistant Administrative Officer

#### *Administrative Division:*

M. A. F. Barren, Chief Administrative Officer  
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#### *Director's Office:*

Elizabeth F. McGowan, Director's Secretary

## I INTRODUCTION AND POLICY

The Wellcome Trust allocated £24.5 millions for the support of medical research and medical history during 1980-82. These funds were derived from the covenanted payments made by The Wellcome Foundation Limited (£23.5 millions) and income from investments. The income of the Trust has increased during this two-year period because of the continuing prosperity of The Wellcome Foundation Ltd. The Trustees would like to congratulate the Company on the success of its enterprise.

The Trustees have a dual role. Firstly, they are responsible for the care of the investments of the Trust so as to ensure an appropriate income. Secondly, they have to maintain an organisation which is competent to disburse the income for the purposes stipulated in Sir Henry Wellcome's Will. The administration of the Will of Sir Henry Wellcome has had to be elaborated from time to time to enable the Trust to keep abreast of the times. During the two-year period covered by this Report, a considerable effort has been required to create a suitable administrative structure for the Trust which would consolidate the arrangements which had been made over the years. After various consultations with legal advisors it was decided, on the advice of the Charity Commissioners, to approach them for a Scheme of Administration. This Scheme, which is reproduced below, was published on 5th October 1981 and came into force on 10th November 1981.

THE CHARITY COMMISSIONERS FOR ENGLAND AND WALES HEREBY ORDER that the following Scheme be approved and established:-

### SCHEME

1. The Charities [collectively known as The Wellcome Trust] and the property thereof shall be administered and managed upon the subsisting trusts thereof as varied or affected by the provisions of this Scheme.
2. The Trustees of the Charities shall have full power from time to time to make regulations for the management of the Charities and for the conduct of their business, including regulations for appointing a director of the Charities and prescribing the function, powers and duties of such director.

3. The Trustees shall also have power from time to time to appoint such persons as they think fit, including any officers of the Charities or other suitable persons, to be a committee or committees for discharging in such manner and subject to such directions as the Trustees shall give, such of the functions of the Trustees, including the appointment and discharge of staff employed by the Charities, as relate to the day-to-day administration and management of the Charities: Provided that at least one of the Trustees shall always be a member of every committee. All acts and proceedings of committees shall be reported in due course to the Trustees for approval and confirmation.

4. Any question as to the construction of this Scheme or as to the regularity or the validity of any acts done or about to be done under this Scheme shall be determined by the Charity Commissioners upon such application made to them for the purpose as they think sufficient.

These new arrangements could be said to crystallise all that Lord Franks had done for the Trust during his Chairmanship, having created an organisation for the Trust which could be expected to stand it in good stead for many years to come. As was noted in the last Report, the sudden death of Lord Armstrong led the Trustees to ask Lord Franks to extend his Chairmanship of the Trust until his successor could be appointed. Lord Franks did not, therefore, retire until 2nd February 1982 when he was succeeded as Chairman by Sir David Steel, who had recently retired from the Chairmanship of The British Petroleum Company P.L.C. and had been appointed a Trustee two months earlier.

Not only have the administrative arrangements of the Trust evolved during this period, but also the internal organisation required for this new structure. In particular the Trustees had to envisage the type of organisation that would be required after Professor R. H. S. Thompson's retirement at the end of August 1982. Also it became obvious to the Trustees that they must take direct responsibility for the employment of the staff of the Wellcome Institute for the History of Medicine. The major operation of transfer was organised by Mr. Harry Mendelson, who joined the Trust following his retirement as Personnel Director of The Wellcome Foundation Ltd. He also undertook a review of the administration of the office of the Trust so as to plan its future under the new Scheme of Administration and the new responsibilities devolving on the staff.

Another problem that had to be settled during 1981-82 was the future of the Wellcome Institute for the History of Medicine. Various factors which are described elsewhere led to the need to move the Institute into a new building, and to the appointment of the Director of the Trust as Director of the Institute as well. We are now pleased to report that the Trust has contracted to purchase Bentley House in Euston Road for the Institute, and the Trustees have received an excellent report from a Working Party under the Chairmanship of Professor Peter Mathias which sets forth an attractive plan for the future which is being implemented. Its conclusions can be found on pages 56-57.

Against this background, the Trust has continued its active programme for the support of medical research and its activities as one of the major charities in Europe. The Director was Chairman of the Association of Medical Research Charities, which held an exhibition in November 1981 opened by H.R.H. The Duke of Gloucester, and has been elected Chairman of the Hague Club, the European Foundations' chief executives' association, for the two-year period ending September 1983.

The principal interest of the Trust has not changed appreciably during the past two years, but a special emphasis has been required in fostering medical research during the financial crisis that is having such a curtailing effect on the universities. One problem has been the danger to tropical medicine created by a variety of factors. The problem was presented in a Supplement to the Transactions of the Royal Society of Tropical Medicine and Hygiene, organised and paid for by the Trust and to which members of the Trust's staff made several contributions. That publication was probably partly instrumental in encouraging the Wolfson Foundation to make a donation of £3 million to the two schools of tropical medicine. The Trust also organised a meeting to bring together the heads of the organisations responsible for funding tropical medicine in Britain, and that meeting led to a critical examination of possible future developments and proposals for positive action to foster the field.

Apart from its Institute for the History of Medicine, the Trust's funds are used principally to provide grants for research workers in the universities to enable them to develop their ideas. Some £12.9 millions was provided in this way during the past two years. In addition, the Trust selects certain fields of medicine for particular attention because they believe that by giving them special support, knowledge will be increased in these relatively neglected areas. The principal fields treated in this way are Tropical Medicine, Mental Health and Veterinary Medicine. All three topics merit support because of their enormous impact on the health of the world population and their relative neglect by scientists. The reasons for this neglect differ and it is the aim of the Trust's policy to define the ways in which special attention can lead to their improvement. In general they all lack recruits to research and also suffer from the failure to apply certain aspects of modern knowledge to the elucidation of their problems. With these defects in mind, the Panels of experts appointed by the Trust try to arrange programmes of support which will encourage recruitment and focus attention on the ways in which the basic sciences may help their development. In all these subjects, fellowships are provided, and in addition awards are advertised which aim at attracting other disciplines to these fields.

Also the Trust helps other topics by providing special fellowships in such fields as Clinical Science, Surgery and Pathology. It is hoped that these fellows will later become the academic leaders of medicine and its branches.

The special programme of Wellcome Senior Lecturerships launched in 1979 has continued, so that the Trust now supports 34 Senior Lecturers. This provision of extra posts for men and women of high research quality will, it is believed, contribute to the continued high quality of university staff during the present recession.

The very difficult problems being experienced in the universities because of the financial cut-back, which have led to soul searching in the London medical schools and had such damaging effects on such institutions as the Royal Post-graduate Medical School, have been regarded with great

dismay by the Trust. Strangely, they have not led to a great increase in the number of applications, possibly because those left in the universities have less time for research. The Merrison Report indicated some of the problems and endorsed the suggestion made to the Committee by the Trust that there should be special attention given to research by the universities to ensure its continued strength.

The Report which follows provides more detailed information on the various programmes of the Trust.

## II THE TRUSTEES AND THEIR STAFF

The retirement of Lord Franks from the Chairmanship of the Wellcome Trust marks the end of a period of great significance. Lord Franks became a Trustee in 1963 and Chairman, in succession to Lord Piercy, in 1965. When he joined the Trust its annual income was £1.28 millions; when he left it was £16 millions. During this time The Wellcome Foundation Limited evolved from a company with sales of £32 millions to one which, in 1981, passed the £500 million level. The affairs of the Company, from which the Trust derives its income, had prospered and three Chairmen had been in charge of the Company. The Trust had grown from a small organisation into one of the most significant charitable institutions in Britain, with an extensive programme in Britain and overseas. The History of Medicine programme had expanded both in the Trust's Institute and in Units in Oxford, Cambridge and University College London. The Museum collection had been transferred to the Science Museum and a major exhibition is now housed in new galleries, opened by H.R.H. Princess Alexandra on 17th December 1981.

Finally, an administrative structure had been created for the Trust which makes it practicable for it to function in its new scale of activities. The overall Chairmanship of all this progress has been the responsibility of Lord Franks. The successful attainment of these objectives, aided by the keen enthusiasm of his fellow Trustees, owes much to the tremendous faith that the Board of Trustees always had in Lord Franks. His easy control of meetings and his masterly summing up of situations made it easy to proceed to practical solutions.

Professor R. H. S. Thompson retired from the Trust at the end of August 1982. He had been a Trustee since 1963 and Deputy Chairman since 1978. During his final seven years as a Trustee he had assisted the Director and his staff in the day-to-day decision-making in the office. Robert Thompson's great knowledge of biochemistry and broad experience of medicine had been a major influence in the development of the programme of the Trust over many years. He was also a delightful companion and colleague who was a great help to



PROFESSOR R. H. S. THOMPSON AND MRS. THOMPSON  
AT THE DINNER TO MARK PROFESSOR THOMPSON'S RETIREMENT  
AS A TRUSTEE



THE NEW CHAIRMAN OF THE TRUSTEES, SIR DAVID STEEL,  
CONGRATULATING DR. J. R. VANE, DIRECTOR OF RESEARCH FOR THE WELCHOME FOUNDATION LIMITED,  
ON BEING AWARDED THE NOBEL PRIZE FOR MEDICINE

all who worked with him. During his time at the Trust he was closely involved with all its developments and provided an admirable scientific balance to the administrative interests of Lord Franks.

Professor Thompson is succeeded as a Trustee by Dr. I. Helen Muir, CBE, FRS, who is Director of the Mathilda and Terence Kennedy Institute of Rheumatology in London, and Head of its Biochemistry Division.

The Trustees noted with great regret the death of Sir John Boyd on 10th June 1981. He had been a Trustee from 1956 to 1966, Deputy Chairman from 1965-66, and Scientific Advisor to the Trustees from 1966-68. A memorial service was held at the Chapel of the Royal Hospital, Chelsea.

As detailed in the Trust's Thirteenth Report, Mr. J. E. K. Clarke, FCA, died on 4th November 1980. He was Secretary to the Trustees from 1937 to 1965, when he became Financial Secretary until his retirement in August 1974.

Both these men, who were great personal friends, made their own special contributions to the work of the Trust.

Other sad losses were Mr. Harry Mendelson whose great skill as Personnel Director of the Foundation was acquired by the Trust on his retirement. He masterminded the transfer of the staff of the Institute to the Trust and also investigated and reported on the administrative structure of the Trust and the Institute. His report will have an immense influence over the next few years as changes he recommended are implemented. It was with great sadness that we heard of his sudden death on 17th February 1982.

Miss Joan Masom, for ten years Secretary to the Director, died on 1st July 1982. She had retired in August 1979. She was a very brave woman who was greatly loved and had been a very valuable member of the staff.

#### *Appointments and Promotions*

Sir David Steel was appointed a Trustee on 1st December 1981 and succeeded Lord Franks as Chairman on 2nd

February 1982. He had retired from the Chairmanship of British Petroleum at the end of November 1981. Dr. C. E. Gordon Smith succeeded Professor Thompson as Deputy Chairman on 28th September 1982.

Dr. Edda Hanington was promoted to be Deputy Director of the Scientific programme of the Trust from 1st January 1981. Unfortunately she had to retire prematurely on 30th November 1982 because of the illness of her husband. She joined the Trust in 1965 and had helped in every phase of its development. She had taken particular responsibility at various stages for the initiation of the Veterinary, Mental Health and Dermatology programmes. She also undertook novel work on the aetiology of migraine. Her special brand of kindness and interest has been a major factor in the development of the Trust. The vacancy created by her retirement will be hard to fill. She relinquished the Deputy Secretaryship of the Trust at the end of 1980 and was succeeded in this position by Dr. Bridget Ogilvie. Dr. Keith Sinclair and Dr. Ogilvie were given the titles of Assistant Director, Veterinary, and Tropical respectively. Dr. B. E. C. Hopwood, who had previously been a member of the Trust's staff, was appointed Director of the Trust's Nairobi Research Laboratories.

#### *Honours*

The Trustees were pleased to note the election of Dr. Ralph Lainson, Director of the Belém Unit, to Fellowship of the Royal Society and to Honorary Fellowship of the London School of Hygiene and Tropical Medicine for his work on leishmaniasis; and Dr. Charles Webster, Director of the Wellcome History of Medicine Unit, Oxford, to Fellowship of the British Academy.

Dr. Bridget Ogilvie received the Degree of Sc.D. from Cambridge University.

Dr. Williams became Chairman of the Hague Club of European Foundations for 1981-83. He was awarded the Mary Kingsley Medal of the Liverpool School of Tropical Medicine in 1982.

As the Report goes to press, we are pleased to congratulate Dr. John Vane, Research Director of The Wellcome Foundation Limited, on the shared award of the Nobel Prize for Medicine. His early work on prostaglandins before he joined the Foundation had been supported by the Trust.

#### **Acknowledgements**

The Trustees wish to express their great appreciation to all the Panel Members, and the many expert referees, who are so important in helping them to take decisions on policy and individual applications in their major fields of interest. The Trustees are also indebted to those who have assisted them in the interviews for Special Fellowships and Major Awards.

## Wellcome Trust Advisory Panels

### *History of Medicine*

Professor P. Mathias, MA, FBA (Chairman from 1st October 1980)  
C. C. Booth, MD, FRCP  
Professor M. D. Grmek, MD (until 31st December 1981)  
Professor A. R. Hall, LittD, FBA (*Ex officio* until 31st August 1981)  
Professor Sir William Paton, CBE, DM, FRCP, FRS  
P. O. Williams, MA, MB, FRCP (*Ex officio*)  
Professor E. A. Wrigley, PhD, FBA  
Staff members responsible: Professor A. R. Hall (from 1st September 1981)  
Miss Rosemary Tilden

### *Veterinary Medicine*

Lord Swann, FRS (Chairman)  
Dr. P. M. Biggs, DSc, FRCVS, FRCPath, FIBiol, FRS (from September 1981)  
Professor M. J. Clarkson, BSc, PhD, DVSc, MRCVS (until August 1981)  
Professor A. Iggó, DSc, FRS (from September 1981)  
J. H. Parsons, OBE, FRCVS  
Professor J. M. Payne, PhD, MRCVS (until August 1981)  
Dr. W. Plowright, DVSc, FRCVS, FRS (from September 1981)  
Professor R. V. Short, ScD, MRCVS, FRS (until August 1981)  
Professor I. A. Silver, MA, MRCVS  
Professor R. H. S. Thompson, CBE, DM, DSc, FRCP, FRCPath  
(until August 1982)  
Staff members responsible: Dr. K. B. Sinclair  
Mr. D. G. Metcalfe

### *Mental Health*

Professor W. S. Peart, MD, FRCP, FRS (Chairman)  
Professor G. W. Ashcroft, MB, ChB, DSc  
Professor J. S. Kelly, MB, ChB, PhD (from September 1980)  
Professor R. Miledi, MD, FRS (from September 1980)  
Professor G. F. M. Russell, DM, BCh, FRCP, FRCPEd  
Professor M. Shepherd, DM, BCh, FRCP, FRCPsych (until August 1981)  
Professor J. K. Wing, MD, PhD, FRCPsych, DPM (from September 1981)  
Staff members responsible: Dr. Eddie Harrington  
Mrs. Anne Edwards

### *Tropical Medicine*

C. E. Gordon Smith, CB, MD, FRCP, FRCPath (Chairman)  
L. G. Goodwin, CMG, MB, FRCP, FRS (until August 1982)  
Professor R. G. Hendrickse, MD, FRCP, FRCPEd, FMC(Paed)  
(until August 1981)  
Professor D. H. Molyneux, MA, PhD (from September 1981)  
Professor G. S. Nelson, MD, DSc, FRCPath, FRCP, DAP&E, DTM&H  
Professor J. C. Waterlow, ScD, MD, FRCP (until August 1982)  
Professor D. J. Weatherall, MA, MD, FRCP, FRCPath, FRS  
Staff members responsible: Dr. Bridget M. Ogilvie  
Mr. C. D. J. Sainty

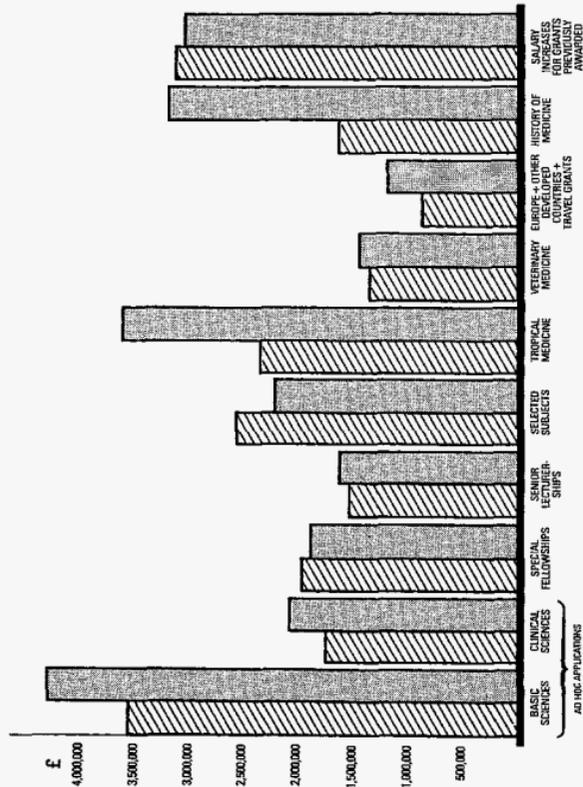
## III GRANTS PROGRAMME

During the period under review the Trust has allocated £24.5 million for the support of research in human and animal medicine and the history of medicine. This represents an 18.5% increase over the preceding two-year period.

The following diagram shows how these funds were allocated and also a comparison with the previous two-year period, 1978-80. The diagram also illustrates the £3,000,652 provided to meet the cost of salary increases for grants previously awarded.

This chapter of the Report describes each of the areas of the Trustees' support, and all grants of over £2,000 are listed in the appropriate sections.

FUNDS ALLOCATED FOR PROJECTS 1980-1982  
 COMPARED WITH 1978-1980



## A. SUPPORT OF MEDICAL RESEARCH IN THE U.K.

### 1. SPECIAL FELLOWSHIPS AND SENIOR LECTURERSHIPS

#### SPECIAL FELLOWSHIPS

##### a) Wellcome Senior Research Fellowships in Clinical Science

Twenty years ago Sir John McMichael, then a Wellcome Trustee, suggested a scheme of Wellcome Senior Research Fellowships in Clinical Science. It was hoped that these awards would give clinical scientists of proven research ability an uninterrupted period of time in which to pursue their investigations. Our last Report drew attention to the unqualified success of the programme.

The launching of the new Wellcome Senior Lecturership awards might appear to have superseded the Senior Clinical Fellowship scheme but this is not, in fact, the case. The Senior Lecturership scheme aims at strengthening university departments and caters both for non-clinical as well as clinical medical scientists, whereas the Senior Fellowships are for clinical scientists who wish to concentrate fully on their own programme of research, while keeping abreast of general clinical medicine during the tenure of the award.

During the past two years nine Fellowships have been awarded: six in London, one in Newcastle, one in Wales and one in Scotland. The fact that three of the recipients of these awards are investigating immunological aspects of disease reflects the increasing awareness of the importance of this field, a trend reflected in the awards from the Clinical Sciences budget. Additional grants for technical help and/or research expenses were made to four Fellows.

The sum of £1,300,000 has been allocated for these awards during the period of this Report, and these are listed on pp. 69-70.

#### **b) Wellcome Senior Research Fellowships in Basic Biomedical Sciences**

These awards were instituted in 1977, to provide support for up to five years for research workers in the basic biomedical sciences. Although the standard of applications was very high, the scheme was discontinued after three years, as it appeared to the Trustees that their new Senior Lecturer scheme, and awards available from the M.R.C. and S.E.R.C., took account of the need for support for the basic biomedical sciences.

Fifteen awards were made while the scheme was operating. During 1980-82 some extensions of Fellowships, and additional awards for expenses, were made, at an approximate cost of £66,000, and these are listed on pp. 70-71.

#### **c) and d) Wellcome Research Fellowships in Surgery and Pathology**

The National Health Service is responsible for providing health care for the population. The Universities and Medical Schools are responsible for training medical students, and for much postgraduate medical education. Research is regarded as an essential part of the duties of a member of the university academic staff, but is also, of course, carried out by N.H.S. staff.

The training requirements for specialists who aim at consultant posts in the N.H.S. affect research activities. The various Royal Colleges (Surgeons, Physicians, Obstetricians, Pathologists, Psychiatrists) lay down rigorous requirements before they will recognise a candidate's suitability to hold a consultant post. These requirements are additional to the college examinations, and the time necessary for their acquisition is at least five years. The Universities do not insist that such formal qualifications are necessary for the holder of a University post, although they are usually obtained.

Because of these requirements, it can be very difficult for doctors in training to have time to carry out original research. This is particularly so for the young surgeon, who needs to devote much time to the acquisition of surgical skills and procedures. The Joint Committee for Higher Surgical Training recognises this, and allows surgeons in training to spend up to two years in research. There are, however, insufficient established posts to make research training possible for all young surgeons who wish it. The Trustees therefore decided that there is a special case for supporting training in surgical research, and in 1971 they established Research Fellowships in Surgery. These are tenable for periods of up to two years.

Since this scheme started, 58 awards have been made. The Trustees' policy to encourage research by surgeons who wish to take up University appointments appears to be successful, for of the eighteen awards made during the first five years of the scheme, five Fellows are now senior lecturers in academic Departments of Surgery. Fellows have not found any difficulty in returning to posts in the Health Service, on termination of their Fellowships.

The training requirements for doctors who wish to become pathologists are directed, almost inevitably, toward enabling them to provide the necessary services for the N.H.S. The result must be that the pathologist has less time available for research. However, there are usually available in the N.H.S. more consultant posts than applicants to fill them. There has consequently been a decline in the number of doctors who wish to pursue research in pathology in a university department. In 1976 the Trustees established Research Fellowships in Pathology in order to provide young pathologists with time to pursue their research interests. These Fellowships are tenable for periods of up to three years. Since this scheme started, twenty-two awards have been made. Of the Fellowships which have terminated, six Fellows have obtained posts in academic Departments of Pathology.

During the period 1980-82, six new awards were made, and £250,000 was allocated for Fellowships in Surgery, and £275,000 for Pathology Fellowships. These Fellowships are listed on pp. 71-72 and pp. 72-73 respectively.

#### **e) Wellcome Research Training Fellowships in Clinical Epidemiology**

These Fellowships, introduced in 1979, are intended to provide support for young medical graduates who wish to pursue a formal training in Epidemiology and to undertake a programme of research involving the application of epidemiological principles and techniques to problems of clinical medicine. Competitions are held annually, and in each of the years 1979 and 1980, the three available Fellowships were awarded. The response to announcements in 1981 and 1982 was, however, rather disappointing and, in the event, only two of the three available Fellowships were awarded in each year. Despite the apparent decline in interest in the scheme, the Trustees remain convinced of the need to promote the integration of epidemiological studies into the work of Clinical Departments, and they have recently decided to make available in 1983 the necessary funds for two additional Fellowships, making a total of twelve.

During the two years 1980-82, some £203,000 was allocated for Research Training Fellowships in Clinical Epidemiology, which are listed on pp. 73-74.

#### **SENIOR LECTURERSHIPS**

#### **Wellcome Senior Lecturerships in Medical and Veterinary Sciences**

In the Spring of 1979 the Trustees initiated a new type of support, 'Wellcome Senior Lecturerships', designed to alleviate the increasing problem of departmental undermanning by the freezing of posts and redundancy and its baneful effect on research.

At that time they decided to fund a number of Senior Lecturerships, to be selected in four separate rounds, spread evenly over the ensuing two years.

Those four rounds have now been completed, the last in April 1982. Thirty-four Senior Lecturerships have been awarded, and a complete list of these appears on pp. 74-77.

The novelty of this form of Wellcome Trust support lies in the twin facts that the successful candidates take a normal share of departmental duties of all kinds, and that the length of the support is greater: five years in the first instance, with a possibility of extensions of three years at a time if the work is prospering. Total involvement in the department brings the additional advantage of freeing all its members to give more time to their research. This aim, important to the Trustees, has been emphasised by their continued insistence on the post vacated by an award, in the same department, being filled.

The number of applicants for each round (75-90) has remained remarkably constant and, although impossible to measure as accurately, so has the quality. For these reasons, the Trustees have decided to offer support for a fifth round of awards. The announcement was made in July 1982.

The distribution of Senior Lecturers over the United Kingdom has happened naturally without intent. On pages 74-77 the Senior Lecturers so far appointed are listed, with their department and the title of their research project, from which it will be seen that there is representation from departments concerned with clinical (15), basic sciences (16) and the various pathologies (3). The success rate has been much the same in all rounds, about one in ten applicants.

A firm relationship is being built between the Senior Lecturers and between them and the Trust. This is encouraged by regular visits to the Lecturers in their place of work and by an annual meeting at the Trust when each one has an opportunity, in turn, to present his work to the others. Two such meetings have been arranged so far, from which the value of a widely diverse disciplinary audience has been evident to everyone.

Although the true value of the scheme must await the outcome of the research and of the Senior Lecturer's careers, the response to it from the medical and veterinary world has been warm and appreciative. So far one Senior Lecturer has been appointed to a Chair (Dr. Adam Sillito to the Department of Physiology at University College, Cardiff), and one has been promoted to Reader (Dr. Stephen Tomlinson in the Department of Medicine, University of Sheffield).

## 2. SUBJECTS SELECTED FOR DEVELOPMENT

### Mental Health

The central objective of the Mental Health programme is to encourage the application of basic biomedical science to the study of mental disorder. Various methods have been used to achieve this purpose and the Panel membership includes advisors from a variety of disciplines.

The total sum allocated to the mental health programme since its inception in 1976 is nearly £4 million. The number of good proposals received annually has gradually increased and during the two years under review in this Report over £1.5 million has been allocated to support research in this field. Of this sum one-quarter has been allocated for research on schizophrenia and one-quarter for research on dementia.

The Mental Health Panel have continued to follow four main lines of policy.

#### *Training Fellowships*

The training of suitable recruits to research into mental disorders remains the first priority. Since 1976 there has been a gradual increase in the number of good applicants coming forward so that of the twenty-two awards made so far, eleven have been in the past two years. Several of these fellows, on completion of training with support from the Trust, have been successful in obtaining funds for their own research programmes. One example is Dr. R. S. J. Briggs who is now a Senior Lecturer in the Department of Geriatric Medicine in the University of Southampton, where he is studying the regulation of cholinergic receptors in the brain.

#### *Academic Support*

The Trust is at present providing appointments in a number of departments of Psychiatry to help strengthen their academic activities. In 1979 the Trustees provided a lectureship over three years for Dr. B. H. Anderton at St. George's Hospital

Medical School, London, to enable him to study neuro-filament pathology in senile and pre-senile dementia. In 1982 he was given a Senior Lecturership appointment by the Medical School.

A grant was given to the Department of Mental Health in the University of Aberdeen to provide the balance of funds for the promotion of Dr. J. A. O. Besson to a Senior Lecturership.

The support provided in Oxford to enable some registrars in training in the department of psychiatry to spend some time in research has yielded such successful results that the Trustees have extended this scheme for a further three years.

#### *Major Awards*

Advertised major awards have attracted many good proposals. Preference has been given to interdisciplinary studies linking the clinical and basic sciences.

In 1981 an assessment was made of the results of the work undertaken with those major awards which had then been held for three or more years. A striking feature was the way in which they had linked new recruits to psychiatric research and helped the development of new projects. The award made in 1978 to Dr. D. F. Roberts in the University of Newcastle upon Tyne and Dr. H. G. Kinnell at Northgate Hospital, Morpeth, for research linking genetic factors with schizophrenia appears to be resulting in the most detailed genetic study of schizophrenia undertaken to date. Dr. D. F. Roberts has been given a Chair and Dr. H. G. Kinnell promoted to a consultant post.

Professor B. E. Tomlinson and the team in Newcastle who were the recipients of an award for research into conditions resulting in loss of intellect, particularly pre-senile and senile dementia, have produced some unexpected results showing that the characteristic presentation of Alzheimer's disease is only present in patients showing the full pathology of the condition.

The award made to Dr. J. L. Crammer and his colleagues at the Institute of Psychiatry, London, for studies of clinical

neuroendocrinology in patients with mental illness has enabled the recipients to develop a new approach to biological psychiatry, using neuroendocrine investigations to test pharmacological hypotheses.

An increasing number of good *ad hoc* proposals have been received. Priority has been given to neuropsychopharmacological and neurobiochemical research and to studies linking clinical and basic science.

Two meetings were held during the period under review. The first was on Dementia which was defined as a global impairment of intellect, memory and personality with an incidence of 2% at the ages of 65 to 70 years rising to 16% at 80-plus years. It was hoped that the new immunological techniques described by Dr. B. H. Anderton might lead to greater understanding of this disorder. During the meeting an impressive film on the surgical management of dementia was shown by Mr. J. S. Lumley and his colleagues.

In the summer of 1982 a number of experts in various fields attended a meeting on Regeneration in the Nervous System which was organised with the help of Professor A. N. Davison. It was clear that many of the techniques available in this area of research had no clinical application, as yet, in the human central nervous system and that increased efforts should be made to promote further interdisciplinary studies.

It is still too early to make a detailed analysis of the effect of the support provided by the Trust but the initial signs are encouraging. This is reflected in the fact that the Trustees have increased the budget for Mental Health for 1982-83 to £1.2 million.

The grants awarded in the field of Mental Health during the period 1980-82 are listed on pp. 80-85.

### Ophthalmology

It appears that both in the Health Service, and in university departments, the large clinical service commitment, the over-worked laboratory service for basic pathological investiga-

tions, and insufficient staff, leave very little time for following up the many unanswered questions in clinical ophthalmology, or for carrying out any research. Difficulties in teaching mean that undergraduates' interests in ophthalmology are unlikely to be fostered.

In May 1981, the Trustees held a meeting with senior research workers in ophthalmology to discuss methods of encouraging research in this area of medicine.

There was general agreement that links between ophthalmology and other subjects are essential, but that the separation of specialities is much less now than it was twenty years ago.

As a result of their discussion, the Trustees advertised two types of award:

#### 1. *Fellowships in Ophthalmic Medicine and Surgery*

The Trustees interpreted these subjects in a broad sense, as studies related to the eye, the visual pathway and closely related structures.

The purpose of these awards was to provide physicians with the opportunity of obtaining a basic training in ophthalmology, and subsequently engaging in whole-time research for up to three years, before obtaining an academic post; or to provide experienced ophthalmologists with opportunities for laboratory research. The Trustees were willing to support a fellow for a period of up to five years, and to vary the terms of the fellowship according to an individual's needs. These might include registration for the degree of Ph.D., or attendance at a recognised course of instruction for one year. There were no applicants for a fellowship, which was a great disappointment to the Trustees.

#### 2. *A special award in Ophthalmic Medicine*

The Trustees were willing to make an award of up to £100,000 for up to three years for a research programme

to be carried out jointly between an Academic Department of Ophthalmology and any other appropriate university department.

The applications did not meet the Trustees' requirements and no award was made.

The disappointing results from these advertised awards illustrate the difficulty of promoting research in a subject in which the existing number of academic departments is relatively small. The Trustees are always willing to consider suggestions put to them outside their advertised schemes, and they are glad to have been able to support the training of Dr. Susan Lightman in basic studies in immunology, which will enable her to study the Clinical Immunology of eye disorders.

During 1980-82, the Trustees allocated over £370,000 to studies in Ophthalmology, and these grants are listed on pp. 86-87. This sum does not include awards in closely related subjects such as neurophysiology of the visual pathway and biochemistry of the retina.

### Infectious Diseases

In 1981, the Trustees decided that they wished to encourage research into infectious diseases with particular reference to clinical studies that aim to elucidate the physiological, metabolic and biochemical changes that accompany and follow defined infections. For this purpose, they advertised a major award of up to £150,000 for a period of not more than five years, and training fellowships for medical graduates with at least five years' post-graduate experience who wished to spend up to three years undertaking research into some aspect of infectious diseases. In addition, it was decided to set aside a small sum of money to enable teams set up to manage cases of rare, life threatening diseases such as Lassa Fever, to be in a position to undertake research on such diseases when the opportunity arises.

The response to the major award advertisement was excellent and, in consequence, two awards were made. Dr. J. Stephen,

Department of Microbiology, University of Birmingham, Dr. D. C. A. Candy, Department of Paediatrics and Child Health and Dr. M. P. Osborne, Department of Physiology at the same University, were funded to investigate the pathophysiology of rotavirus and *Salmonella* experimental gastroenteritis in parallel with human clinical studies, and Professor D. J. Weatherall, Nuffield Department of Clinical Medicine, University of Oxford, was funded to study the pathophysiology of the anaemia of infection. Professor D. I. H. Simpson, Special Pathogens Reference Laboratory, Public Health Laboratory Service, Porton Down, was given support to study rare life threatening diseases and Dr. Susan P. Fisher-Hoch a fellowship to work with Professor Simpson on the pathogenesis and control of haemorrhage in viral haemorrhagic fevers. Dr. J. Cohen, who had already had a three-year fellowship from the Trust to begin his training in this area, was awarded support for a further three years to work on endotoxin in the immuno-compromised host under Professor D. K. Peters, Department of Medicine, Royal Post-graduate Medical School. Dr. Maureen B. Duggan was awarded a fellowship to study the metabolic and nutritional cost of childhood infectious diseases under Professor R. D. G. Milner, Department of Paediatrics, University of Sheffield.

Grants awarded in the field of Infectious Diseases during the period of this Report are listed on p. 88.

### Toxicology

When in 1978 the Trustees first selected toxicology as an area in which they wished to encourage more research, they hoped that this would lead to the establishment of a continuing interdisciplinary centre of toxicological study within a University department. With this end in view they advertised major awards in toxicology annually for the subsequent three years. No major proposal of the type envisaged was received and in every case the awards were shared between a number of applicants. In 1981 an award for research into toxicological mechanisms was shared by applicants in four centres.

The original hope of the Trustees was therefore unfulfilled and in 1981 they turned for help to Professor Sir William Paton, Head of the University Department of Pharmacology in Oxford. This department had long been keen on establishing close interdisciplinary links and studying toxicological mechanisms. A strong nucleus of interested research workers already existed for the establishment of a continuing interdisciplinary centre of toxicology study and the Trustees decided that their purpose could be achieved by building on this. Professor Sir William Paton has agreed to guide the new unit through its formative years and additional support from other sources is likely to be obtained.

No major award in toxicology was advertised in 1982 but the funds available for this were used to provide a Senior Lecturer appointment in the developing unit at Oxford over a minimum period of five years. The Trustees have also expressed their willingness to fund a second lectureship in this unit when a suitable candidate is found.

During the two years under consideration approximately £500,000 was allocated to support the development of research into Toxicology, and the grants awarded in this subject during 1980-82 are listed on pp. 89-90.

### 3. SUPPORT OF UNIVERSITY RESEARCH

#### CLINICAL SCIENCES

During the period under review in this report, £2 million has been allocated to those areas of clinical research that are not included in one of the Trustees' special schemes for selected fields.

In the last Report, Neurology received the most active support, taking 20% of the clinical sciences budget. In this biennium Neurology (12%) has been superseded by Clinical Immunology (15%) and Endocrinology (13%). Despite the fact that Dermatology is no longer a subject selected for particular support, previous efforts in this area have borne fruit and, as in the period reviewed in the last Report, Dermatology has again taken a considerable part of the clinical sciences budget (12%). Most of the support allocated under this heading has provided research assistance, but also included is a special fellowship in Clinical Pharmacology and Therapeutics for Dr. S. F. M. Grimmer in the University of Liverpool and a lectureship for Dr. Jaya L. Naidoo in the Department of Bacteriology at the Institute of Dermatology, London.

The Trustees are always willing to consider small equipment grants where the need can be justified in relation to the programme supported. Large equipment grants are rare, though the Trustees sometimes make a contribution towards a major item. Such a grant was given to the University of Edinburgh as a contribution towards the cost of purchasing equipment to evaluate proton nuclear magnetic resonance imaging. This will be used for the investigation of a number of conditions affecting the heart, lungs and central nervous system. The Trustees also made a grant to Professor R. H. T. Edwards of University College Hospital, London, as a contribution towards the cost of equipment necessary to carry out topical nuclear magnetic resonance studies of problems of human metabolism. The studies are to be in collaboration with Mr. J. Clifton, Professor E. O. Reynolds, and Professor D. Wilkie.

Personal support was provided, through the award of a special fellowship for five years, to Dr. B. D. Ross, of the Department of Clinical Biochemistry and Clinical Medicine, The Radcliffe Infirmary, Oxford. The purpose of the award was to enable Dr. Ross to assist in the evaluation of the clinical application of nuclear magnetic resonance studies, particularly in studies of renal disorders.

Grants awarded for research in the Clinical Sciences during the period of this Report are listed, alphabetically by subject, on pp. 91-103.

### BASIC SCIENCES

It is clear from the Trustees' Reports for the past ten years, that they have always set aside a substantial proportion of the total budget for support of research other than in the specially selected subjects. For the years 1980-82, £3.6 million has been allocated to the basic sciences. It was not until the Trustees' Report for 1970-72 that budgetary headings were so divided that there was a separate category for Basic Science. At that time, the Report said that their approach to support of the basic sciences was to seek in each project an obvious relevance to an increased understanding of the biological problems of man. The Trustees, nevertheless, do not adhere strictly to their policy when considering applications outside the specially selected subjects. They continue to make awards for projects which attempt to answer fundamental biological or physicochemical problems, because of the intrinsic interest of the problem.

The Trustees are aware of the special problems related to carrying out research in the basic sciences. There is a decreasing number of posts for those seeking whole-time employment, and there are difficulties in obtaining research support by those scientists who have posts with tenure. The Trustees hope that their various special schemes (Senior Lecturer awards; research leave, which enables a scientist to spend his whole time in research for up to two years, while the Trust pays for his replacement; and linked fellowships, to enable a basic scientist to carry out studies in a clinical department)

contribute to some extent to the solution of these problems of the support of basic research. In general, methods of support are through grants for projects, including salaries and running expenses, and cost of equipment.

Of the £3.6 million allocated, £855,000 was set aside for projects in Biochemistry, Cell Biology and Molecular Biology, and £1,112,000 for projects in Physiology and Reproductive Physiology. The Trustees have not identified any particular aspect of Biochemistry or Physiology for special support.

A list of the grants awarded in the field of Basic Sciences during 1980-82, arranged alphabetically by subject, appears on pp. 103-124.

## B. SUPPORT OF MEDICAL RESEARCH OVERSEAS

### 1. TROPICAL MEDICINE

#### INTRODUCTION

The Wellcome Trust has had a long-standing interest in, and commitment to, the support of research in Tropical Medicine. The Trustees regard this subject as the study of conditions and diseases as they appear in the tropics and not just the study of the infectious diseases that are largely confined to tropical areas. Thus, of the grants current in June 1982, about 60% concerned the study of tropical infectious diseases, 40% investigations into non-infectious conditions. During the period under review, the Trustees decided that they wished to assess more closely than in the past the success of the research they fund and various methods have been introduced to achieve this aim. All grants over £75,000 are assessed after two years by a report which is discussed by the Tropical Panel. Most meetings of the Panel include a talk which often concerns a major award. During the period under review, Dr. S. R. Bloom and Dr. Julia M. Polak discussed the progress of their research into peptidergic innervation in Chagas' disease, Professor W. S. Peart and Professor P. S. Sever, the hypertension project in the Nairobi Unit, and Professor A. B. Kay, his studies of Nimiti asthma in the Sudan. Also during 1980-82 three meetings were organised to discuss topics of special interest. The first, held at the Wellcome Institute in October 1980, before the Franks Room became available at the Trust, was a one-day meeting on malaria, at which all the speakers were Trust supported. In May 1982 a meeting on 'Genetics and Protozoa' was held in the Franks Room. There are several current grants investigating speciation in protozoal parasites, largely using isoenzyme analysis, and it seemed appropriate to examine progress in this field and obtain some ideas about likely future developments. Other grants concern the effects of genetic variation in the host on the ability of parasites to establish and multiply, and two papers on this topic were given at the same meeting. Finally, a half-day workshop on Tropical Pathology was organised. Expertise in pathology is fundamental to medicine and the Trustees have been concerned at the rapid decline of expertise in its tropical



H. H. PRINCE PHILIP HANDING DR. R. LAINSON, F.R.S.,  
DIRECTOR OF THE WELLCOME UNIT IN BELM, HIS DIPLOMA UPON BEING MADE  
A FELLOW OF THE LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

THE DIRECTOR OF THE TROPICAL METABOLISM RESEARCH UNIT IN JAMAICA  
EXPLAINING A RESEARCH PROJECT TO THE DIRECTOR OF THE TRUST



aspects. The meeting on Tropical Pathology brought together the few remaining authorities in this field with young medical and veterinary pathologists known to have some involvement in tropical medicine, to discuss ways of strengthening and maintaining a core of expertise in this subject. Since this meeting, a Tropical Pathology Unit has been set up at the London School of Hygiene and Tropical Medicine with support from the Wolfson Foundation, and Dr. S. B. Lucas, trained as a tropical pathologist, with the aid of a special fellowship under Professor M. S. R. Hutt, and Dr. C. D. Mackenzie who are employed under this grant will establish a Tropical Pathology Club to meet about twice a year in the Franks Room.

Although the Units are a major feature of the Trustees' support for tropical medicine, the Directors of the Units had never met as a group and therefore a two-day meeting of Unit Directors was arranged in September 1981. On the first day the Directors met at the Trust and discussed problems associated with the management of their Units and research programmes with each other and with the staff of the Trust concerned with the running of the Units. On the second day, the work of the Units was presented to a small audience selected to ensure that there were some people present with expert knowledge of the work of each Unit. This two-day meeting was regarded as useful and worth while and will be repeated at suitable intervals in the future.

The Tropical Medicine activities of the Trust are the responsibility of Dr. B. M. Ogilvie who joined the staff full time in January 1981. Dr. Ogilvie is also a member of the Council of the Royal Society of Tropical Medicine and Hygiene and serves on its meetings sub-committee and on a working party set up by the Society to consider the future of tropical medicine. Dr. P. O. Williams was also a member of this Council during this period and was involved with the President of the Society, Dr. L. G. Goodwin, a member of the Trust's Tropical Medicine Panel, in preparing a report on the position of Tropical Medicine in Britain today, published with the aid of a Trust grant as a Supplement to the Transactions of the Society.

#### ANALYSIS OF SUPPORT

During 1980-82, £3,600,000 was distributed for research in Tropical Medicine. Despite the political and economic changes which have affected the academic community and the Schools of Tropical Medicine in particular, the number and quality of applications received in this field has not diminished and the Trustees have increased the amount of support given during this period. About 30% of the allocations are used to run the Trust's Units in countries abroad, about 20% for special lectureships and fellowships and the remainder is allotted to *ad hoc* applications. In addition to this support financed through the Tropical Medicine programme of the Trust, six of the 34 holders of Wellcome Trust Senior Lecturerships undertake research in the field of tropical medicine. Four of the six were awarded their Senior Lecturerships during 1980-82, three to scientists at the London School of Hygiene and Tropical Medicine: Dr. Jenefer M. Blackwell to work on the genetics of the host response to visceral leishmaniasis; Dr M. H. N. Golden, who is based in the Department of Human Nutrition at the School but works in the Tropical Metabolism Research Unit, Jamaica, on the effects of dietary manipulation on loss of oedema and recovery from malnutrition in children; and Dr. M. A. Miles to work partly in the Department of Medical Protozoology but also in the Wellcome Parasitology Unit, Belém, on epidemiological studies of Chagas' disease using biochemical and immunological taxonomy. The fourth was awarded to Dr. A. Tait, who works in the Department of Genetics, University of Edinburgh, on genetics and gene regulation in protozoa. An analysis of the grants current in June 1982 in the field of Tropical Medicine, including the Senior Lecturerships in this field, showed that about 40% of the budget had been awarded to the U.K. Schools of Tropical Medicine in Liverpool and London. All those associated with the Tropical Medicine programme of the Trust are particularly concerned that the support of outstanding young individuals should have the highest priority for funding to ensure the future strength of research in this subject.

#### TROPICAL LECTURERSHIPS

This scheme, which was described in the twelfth and thirteenth Reports of the Trust, is to enable young scientists to work in

the tropics whilst based in the United Kingdom in a department to which they return for a short time annually and for a final year when their work abroad is complete. During 1980-82 three appointments were made. Dr. G. B. Lee is investigating intestinal immune mechanisms in tropical sprue and non-specific tropical enteropathy, and Dr. J. R. Patel the possible role of coronavirus infection in diarrhoeal disease in man in India at the Wellcome Trust Research Unit in Vellore. Both are based in the Medical Research Council's Clinical Research Centre at Northwick Park Hospital, London. Dr. J. E. Sanderson is studying hypertension and cardiomyopathy at the Wellcome/Kenya/St. Mary's Research Unit in the Clinical Research Centre, Kenyan Medical Research Institute, Nairobi, based with Professor W. S. Peart in the Medical Unit, St. Mary's Hospital Medical School, London.

The scheme will be readvertised and continued for the foreseeable future.

#### ADVANCED TRAINING FELLOWSHIPS

This scheme was initiated in the period under review. It is designed to provide up to three years' support for clinical or non-clinical United Kingdom based scientists who have already had three to five years' experience in any field of tropical medicine and who wish to expand their scientific skills by working in the tropics or in a discipline which differs from their previous experience for at least six months during the tenure of the Fellowship. Four awards have been made, all to non-clinical graduates. Three went to scientists from the London School of Hygiene and Tropical Medicine: Dr. Hilary A. Flockhart, Department of Medical Helminthology, will investigate the enzymic characterisation of nematodes of medical and veterinary importance spending a year with Dr. C. Bryant in the Department of Zoology, Australian National University, Canberra, Australia. Dr. Wendy C. Gibson, Department of Medical Protozoology, will study biochemical methods for the identification of trypanosomes causing human trypanosomiasis in Africa, in part with Professor P. Borst, of the University of Amsterdam. Dr. C. J. Leake, Department of Entomology, will undertake field and

laboratory studies on the vector competence of wild and colonised mosquitoes for Japanese encephalitis and related flaviviruses with Dr. Donald S. Burke at the U.S. Armed Forces Research Institute of Medical Sciences in Bangkok. The fourth award went to Dr. P.-C. Tai from the Department of Immunology, Royal Postgraduate Medical School, who will study human eosinophil toxicity and membrane biochemistry in association with Dr. M. J. Crumpton, Imperial Cancer Research Fund Laboratories, and Dr. J. B. Clarke at St. Bartholomew's Hospital Medical College.

This scheme will continue because support is difficult to find for scientists who wish to change fields, especially if this requires that they work abroad to acquire experience or skills not available in the United Kingdom.

#### MAJOR AWARD

A major award of £200,000 for up to five years was advertised for research into any aspect of medicine in the tropics with preference for proposals demonstrating an interdisciplinary approach. Five applicants were selected for interview on the basis of referees' opinions, and the award was shared between two of them: Dr. D. A. Broadbent from the Department of Microbiology, London School of Hygiene and Tropical Medicine, for an investigation of the mechanisms of pathogenicity of *Vibrio cholerae* with subsequent exploitation for vaccine development, and Dr. J. R. Kusel, Department of Biochemistry, University of Glasgow, for a study of the mobility of macromolecules in the surface membranes of *Schistosoma mansoni* and other parasites, in collaboration with Dr. D. I. Stott, Department of Microbiology and Immunology, University of Glasgow, and Professor P. B. Garland, Department of Biochemistry, University of Dundee.

#### WELLCOME TRUST TROPICAL UNITS

The Units set up by the Trust in the tropics are central to the Trust's Tropical Medicine research programme. They permit long-term support for the study of particular problems and act as a base for British graduates who wish to undertake research

into tropical diseases. At the same time they provide an opportunity for local graduates to obtain research experience both in the Unit and in the U.K. and thereby strengthen the scientific base of the host country.

The Vellore Unit, originally set up under expatriate leadership, is now directed by an Indian, Professor V. I. Mathan. During the period under review, several graduates from the Vellore and Bangkok Units have been selected for postgraduate training in Britain, with the intention of returning to work in the Units concerned, as detailed later. Unfortunately it has not proved possible to obtain a comparable degree of involvement of local graduates in the Belém or Nairobi Units.

#### Wellcome Trust Unit, Nairobi

The change of direction of this Unit and the appointment of Dr. B. E. C. Hopwood as its Director on 1st December 1980, was described in the thirteenth Report of the Trust. At present the Unit houses two research programmes, the Wellcome/Kenya/St. Mary's co-operative programme to investigate the effects on blood pressure of migration from a rural to an urban environment and the factors associated with it, and a second programme described for convenience as the Wellcome Trust Research Laboratories, which undertakes studies on schistosomiasis funded in part by other organisations.

The Laboratory also acts as a centre for some of the staff of the Clinical Research Centre of the Kenyan Medical Research Institute until they obtain their own premises. The blood pressure study and the Clinical Research Centre staff are housed outside the original Wellcome Trust compound in the office block which has been enlarged and refurbished to accommodate everyone. The work on schistosomiasis occupies the original Wellcome Trust Laboratory compound.

The blood pressure study is the responsibility of Dr. N. R. Poulter who is based with Professor W. S. Peart at St. Mary's Hospital Medical School, London. Dr. J. E. Sanderson, who

holds a Tropical Lecturership to study cardiomyopathy in patients in the Kenyatta Hospital and to provide a backup to Dr. N. R. Poulter, is also based in the Unit. U.K. medical students, mostly but not exclusively from St. Mary's Hospital, go out to Kenya in pairs for about two months to help with the study of blood pressure especially in the rural areas in association with Kenyan medical students. Various advisors to the programme have paid short visits to the Unit, Professor P. S. Sever (July 1980, January 1981 and March 1982), Professor G. A. Rose (September 1980), Dr. Kay-Tee Khaw (August 1980). Professor Peart, who is an honorary Director of the programme, visited the Unit in April 1982 together with Dr. P. O. Williams and Dr. B. M. Ogilvie. Lord and Lady Franks visited the Unit in January 1982, accompanied by Dr. B. M. Ogilvie. Professor M. Mugambi, Director of the Clinical Research Centre and honorary Director of the research programme, visited the U.K. in September 1980, and Professor W. Gitau, Department of Medicine, University of Nairobi, in March 1982.

The work on schistosomiasis is funded in part by the Trust but the salaries and expenses of expatriate scientists working on this programme are paid largely by other organisations, such as the Edna McConnell Clark Foundation, the schistosomiasis component of the World Health Organization Special Programme for research and training in Tropical Diseases, and the Rockefeller Foundation.

#### *Wellcome Parasitology Unit, Belém*

In 1982, Dr. Ralph Lainson, the Director of the Unit, was elected a Fellow of the Royal Society, made an honorary Fellow of the London School of Hygiene and Tropical Medicine and awarded an honorary Doctorate of the University of Pará, Brazil. The work of the Unit was reviewed in 1981 and received high praise from the assessors. During the period under review, Dr. R. Lainson, Dr. J. J. Shaw and Dr. P. D. Ready completed their studies on the epidemiology of *Leishmania braziliensis guyanensis*, having shown that edentates are reservoir hosts for this parasite, and they are now focusing their attention on the complex problems of cutaneous and mucocutaneous leishmaniasis caused by the

parasite loosely described as *L. braziliensis braziliensis*. This requires the definition of a neotype of *L.b. braziliensis*, the completion of epidemiological studies on the diseases associated with this species in the Serra dos Carajas region of Pará State in North Brazil, including studies of vectors and reservoir hosts, and the collection and characterisation of stocks of *Leishmania* from man, sandflies and wild mammals in the Amazon region. In addition to the several *in vitro* and *in vivo* methods already in use in the Unit for this purpose, Unit staff are collaborating with Dr. J. R. David and Dr. D. McMahon Pratt (Harvard University) to investigate the value of monoclonal antibodies for distinguishing the species and subspecies of *Leishmania*. In studies on the island of Marajo, the Unit has found that a fox (*Cerdocyon thous*) is the natural host of *L. donovani chagasi* which causes the rare cases of visceral leishmaniasis seen in the Amazon region, and the vector has been identified as *Lutzomyia longipalpis*. The Unit also has a major commitment as a reference and training centre for parasitological problems of many kinds in the region served by its host institution, Instituto Evandro Chagas.

Dr. M. A. Miles was awarded a Wellcome Trust Senior Lecturership to continue his studies on *Trypanosoma cruzi*, in part in the Unit and in part in London. Dr. Miles has identified two major types of *T. cruzi* (zymodemes) using isoenzyme analysis and is investigating the association of these with the different clinical conditions caused by *T. cruzi*. This involves the examination of *T. cruzi* isolates from different regions and countries of South America and the development of monoclonal antibodies which will differentiate the various types of *T. cruzi*.

Dr. P. O. Williams and Dr. B. M. Ogilvie visited the Unit in January 1981.

#### *Wellcome Trust Research Unit, Vellore*

This Unit has continued its multi-disciplinary approach to the problems of tropical sprue and other diarrhoeal diseases in South India under the direction of Professor V. I. Mathan, who was elected a Fellow of the Indian Academy of Science in 1982. The work of the Unit was favourably reviewed in 1981.

Special emphasis is being placed on the possible role of coronaviruses in the aetiology of sprue. Dr. J. R. Patel was awarded a Tropical Lecturership to go to Vellore to set up a virology laboratory for this purpose with support from Dr. M. B. McNaughton (who visited the Unit in August 1982) and Dr. D. A. J. Tyrell with whom he is based in the Division of Communicable Diseases, at the Medical Research Council's Clinical Research Centre at Northwick Park Hospital, London.

The Trust has provided Fellowships to enable several young medical graduates from the Unit to obtain postgraduate training in Britain. Dr. G. Kurian is studying the immunology of gastric mucosal lymphocytes with Dr. G. L. Asherson, Division of Immunological Medicine, MRC Clinical Research Centre, London, and Dr. Susy S. Kurian is investigating the influence of chronic small bowel infection on the histopathology of the neuroendocrine system with Dr. Julia M. Polak, Department of Histochemistry, Royal Postgraduate Medical School. Dr. Raj K. Rolston will study the role of gut hormones in the intestinal adaptation to acute and chronic infection under Dr. S. R. Bloom, Department of Medicine, Royal Postgraduate Medical School, and Dr. D. D. K. Rolston will study intestinal secretion in man under Dr. A. M. Dawson, Department of Gastroenterology, St. Bartholomew's Hospital Medical College. Dr. K. A. Balasubramanian, biochemist to the Unit, spent three months with Professor A. T. Diplock, Department of Biochemistry, Guy's Hospital Medical School, to study an inhibitor of lipid peroxidation which he has found in the small intestine, and attended a meeting on Vitamin E arranged by the New York Academy of Sciences in November 1981.

Professor V. I. Mathan visits Britain annually to maintain and develop his scientific contacts, and in June 1981 he also visited the U.S.A. for the same purpose. He and Professor Minnie M. Mathan attended the Falk Foundation Intestinal Meeting at Titisee, West Germany, in May 1981, and Professor V. I. Mathan attended the International Symposium on Fibre in Human and Animal Nutrition at Massey University, New Zealand, in May 1982, visiting scientists in Australia en route.

Dr. J. H. Cummings visited the Unit in January 1982 to advise on research into dietary fibre. Lord and Lady Franks, accompanied by Dr. B. M. Ogilvie, visited the Unit in December 1980.

*Wellcome/Mahidol University/Oxford Tropical Research Unit, Bangkok*

The establishment of this Unit, which is located in the Faculty of Tropical Medicine, Mahidol University, and is directed by Dr. D. A. Warrell, who is based with Professor D. J. Weatherall in the Nuffield Department of Clinical Medicine, University of Oxford, was described in the thirteenth Report of the Trust. During 1980-82, Drs. D. A. and Mary J. Warrell and Dr. N. J. White, a Tropical Lecturer, have shown that dexamethasone therapy does not enhance the survival of patients with cerebral malaria and they have begun a series of studies on the use of quinine and its derivatives in malaria. They are also engaged in a series of trials on vaccination regimens for rabies and studies of rabies encephalitis, and Dr. D. A. Warrell has initiated studies on snake bite. These studies would not have been possible without the continued support and participation of their Thai colleagues and collaborators. Dr. Sornchai Looareesuwan, whose participation was essential to the success of the studies on malaria, was awarded a Fellowship to study techniques in tropical haematology with Professor D. J. Weatherall in Oxford, and during the former's absence his place has been filled by Dr. Pornthep Chanthawanich. Dr. Pravan Suntharasamai and Dr. Chaisin Viravan have helped with the rabies and snake bite studies. Dr. S. Pukrittayakamee was awarded a Fellowship to develop monoclonal antibodies for use in the snake bite studies with Dr. (now Professor) A. J. McMichael, Nuffield Department of Clinical Medicine, Oxford.

Dr. N. Veall (from the MRC Clinical Research Centre, London) spent a month in the Unit in May 1981 to help with measurements of cerebral blood flow; Dr. R. D. G. Theakston (Liverpool School of Tropical Medicine) spent six weeks in May and June 1982 helping with ELISA methods for studying the immune response following snake bite and Dr. Susan P. Fisher-Hoch, who has a Fellowship from the Trust to work in

the Special Pathogens Reference Laboratory, Public Health Laboratory Service, Porton Down, worked in the Unit from July until October 1982 to help with the studies on rabies.

The Trustees are especially appreciative of the help and support given to the staff of the Unit by Professor Chamlong Harinasuta, Professor Khunying Tranakchit Harinasuta and Professor Danai Bunnag.

Lord and Lady Franks visited the Unit in December 1980 accompanied by Dr. B. M. Ogilvie.

*Tropical Metabolism Research Unit/Trace Element Research Group, Jamaica*

The Trust has had a long association with the Tropical Metabolism Research Unit, first under its originator and first Director, Professor J. C. Waterlow, FRS, and then under his successor, Professor D. M. Picou. Dr. A. A. Jackson succeeded Professor Picou under exceptionally difficult political and economic circumstances as Acting Director in October 1978 and was formally appointed its Director in February 1981. The Trustees have provided funds for core support of the research programme of this Unit annually since 1980. Dr. M. H. N. Golden has worked at the Unit since 1974, studying protein turnover in malnourished children, based with Professor J. C. Waterlow in the Department of Human Nutrition, London School of Hygiene and Tropical Medicine. From 1974-1981 he was supported by Fellowships under the Wellcome/London/Harvard Scheme, which has now terminated. In 1981 he was awarded a Wellcome Trust Senior Lecturership to continue his work in Jamaica on the effects of dietary manipulation on loss of oedema and recovery from malnutrition in children. In 1982 a Trace Element Research Group was established under Dr. Golden in the Tropical Metabolism Research Unit. This Group will be funded on the basis of an annual budget and will investigate the role of trace elements in the recovery from malnutrition in children.

A list of the grants for research in Tropical Medicine awarded over the two-year period 1980-82 appears on pp. 125-136.

## 2. EUROPEAN PROGRAMME

In the period 1980-82, the Trustees allocated nearly £700,000 to their European programme. Most of this was awarded through fellowship schemes, and was an increase of £215,000 over the previous two years.

### DISTRIBUTION OF AWARDS BY COUNTRIES

*September 1980-August 1982*

(Fellowships usually of one year's duration)

	<i>From</i>	<i>To</i>
Bulgaria	5	—
Czechoslovakia	4	—
East Germany	2	—
Finland	1	—
France	3	4
Greece	2	—
Hungary	8	—
Iceland	1	—
Italy	12	—
Netherlands	1	1
Norway	—	2
Poland	11	—
Portugal	1	—
Spain	4	—
Sweden	—	1
Switzerland	—	1
U.S.S.R.	1	—
West Germany	1	—
Yugoslavia	1	—
	58	9
	—	—

There is an obvious disparity between the number of awards of fellowships to visit Europe, and those to come to the United Kingdom. There have been no requests for fellowships to visit the Eastern European countries in the past two years. Unfortunately it appears that British scientists have a limited knowledge of scientific opportunities in these countries.

National bodies in most West European countries have exchange agreements with The Royal Society. France has also an agreement with the Medical Research Council. It seems likely that a good candidate will receive support from official sources. The Trust office, therefore, tries to direct applicants in the first place to The Royal Society or the M.R.C., but is always willing to consider special cases, and to consider applications for visits which are being arranged at short notice.

There is a reduction in applications to visit Scandinavia. This may be a consequence of the decreasing flow of scientific visitors from Scandinavia to this country. Conversations with Scandinavians suggest that the difficulties of finding permanent employment in their countries are leading to fewer requests for one-year fellowships.

The noticeable increase in applications from Italy is probably a result of the enormous difficulties facing young academics there who wish to carry out research.

Awards for visits to Europe are advertised, and considered by the Trustees once yearly. The only country with which the Trust has a formal exchange agreement is Hungary. There is a looser arrangement with the Carlsberg Foundation in Denmark, and the Swedish M.R.C., whereby the sending organisation pays the salary, and the receiving organisation pays research expenses of the fellow. The possibility of shorter visits to the Scandinavian countries is also noted in the advertisement. Awards for visits from Europe are not advertised. Their availability is known to official organisations, and applications are considered throughout the year.

Good applications for fellowships have been in excess of the available funds, but there have been fewer applications for grants under the Trust scheme for promoting interlaboratory collaboration, although the Trust office makes this scheme known whenever possible.

During 1980-82, the Trustees have supported collaboration between laboratories in Budapest and Oxford, and Brunel and Oslo. The Trustees continued their scheme to enable Italian

research workers, selected by a committee in Milan, to visit the United Kingdom for short periods.

Most of the visiting fellows are interviewed before they return home; and British fellows send to the office reports and reprints of papers. The Hungarian Institute for Cultural Affairs informed the Trustees that, of 27 recent fellows, 22 have maintained contact with their British colleagues, and 12 have been promoted after returning to Hungary. Dr. Williams and Dr. Bembridge visited hospitals and laboratories in Budapest in 1981. The Trustees renewed their Agreement with the Hungarian Institute for Cultural Affairs.

On the evidence available, the Trust fellowship scheme is a valuable contribution to research, and the allocation for 1982-83 has been increased to £450,000.

The grants awarded during 1980-82 under the European Programme are listed, alphabetically by countries, on pp. 137-147.

### 3. OTHER OVERSEAS AWARDS

These awards are made to scientists from countries other than Europe and the Tropics. In general, the Trustees' policy is to consider applications from scientists who are already in the United Kingdom, supported by a Fellowship grant, and wish to extend their stay to complete a research project. Only rarely are awards made to enable overseas scientists to visit the United Kingdom to start a research project.

Formal Agreements provide for short visits of up to three months, between the United Kingdom and the United States, South Africa, Australia and New Zealand. The Agreements are with the Clive and Vera Ramaciotti Foundation in Sydney, the Stella and Paul Loewenstein Charitable and Educational Trust in Johannesburg, the Medical Research Council of New Zealand, and the Burroughs Wellcome Fund in Research Triangle Park, U.S.A. Scientists from Ireland are eligible for these awards.

This scheme is continuing to be very successful and 114 awards totalling nearly £95,000 have been made during 1980-82.

The Wellcome Japanese-Fellowship scheme has been continued. Five awards were made to Japanese scientists during the period.

The Trustees initiated in 1955 a programme for travel grants (maximum award £500) for three main reasons:

- 1) to enable a scientist to make a short visit to another country in connection with his work; for example, to learn a special technique
- 2) to provide a young scientist with travel funds to enable him to take up a research appointment overseas, when no travel expenses are available. Such an appointment is usually a fellowship of one year's duration
- 3) to enable research scientists to attend small meetings abroad in particular areas relevant to the applicant's field of research.

During the period 1980-82, approximately £135,000 has been awarded for 481 Travel Grants. The Trustees have decided to increase the maximum sum awarded to any individual to £750 for 1982-83.

The total support provided by the Trust in the category of Other Overseas Awards and Travel amounted to nearly £540,000, and the grants awarded are listed, alphabetically by countries, on pp. 148-153.

### C. VETERINARY AND COMPARATIVE MEDICINE

During 1980-82, the Trustees allocated some £1.44 million for research in the field of veterinary and comparative medicine thus raising the total support provided since 1968 to about £5.8 million. About 94% of the expenditure comprised grants and awards to Universities, and the Veterinary Schools in the United Kingdom continued to be the main beneficiaries. Project grants, the Trust's scheme for the support of *ad hoc* proposals submitted by members of staff of the Universities, absorbed about 53% of the budget, a figure somewhat lower than that mentioned in the last Report (65%) and reflecting an increased expenditure on awards made under the Veterinary Research Fellowship and Research Training Scholarship schemes. Despite the prevailing uncertainties concerning career prospects in teaching and research, the latter schemes attracted considerable interest, and a total of seventeen awards absorbed about 33% of the budget (eleven awards and 19% in 1978-80).

The Major Award scheme, introduced in 1977 and providing more substantial grants in aid of research in veterinary medicine, has been continued. Initially, these awards were offered for the support of research in specific topics, but in more recent announcements no restriction has been imposed on the field of work. Previous Reports have included details of three earlier awards, and the fourth, a grant of up to £157,000 for the support of a collaborative study of mucosal protection against viral infection of the respiratory tract, to be carried out by a group of virologists and immunologists under the supervision of Professor F. J. Bourne, Department of Veterinary Medicine, University of Bristol, was made in 1981. Several applications were received in response to the announcement of the availability of one or more major grants in 1982, but none were considered suitable for an award. Expenditure on this scheme during the period under review amounted to about 11% of the total budget.

Following the policy reviews heralded in the last Report, and after consideration of recommendations made by the Veterinary Medicine Advisory Panel, the Trustees decided to broaden the scope of their Veterinary Medicine programme

by the introduction of two new schemes of support. Thus additional funds were allocated for the support of members of staff of United Kingdom institutions who wish to conduct research either wholly or partly in an overseas environment; and provision was made for up to five awards for veterinary undergraduates who wish to pursue an approved intercalated course in the Natural Sciences. The announcement of the availability of ear-marked funds for the support of 'overseas' veterinary research attracted considerable interest and, during 1981-82, expenditure amounted to about £114,000 or some 8% of the total budget. The availability of the new awards for undergraduates has only recently been announced and, as yet, no applications have been received.

Over a period of sixteen years, the Trust has provided 63 Research Training Scholarships for young veterinary graduates and 37 Veterinary Research Fellowships for more senior workers, each award with tenure for up to three years. Many recipients of these awards have subsequently achieved eminence in their chosen fields, and the Trustees are always gratified to learn of the success of individual Fellows and Scholars. During the period under review, two 'Wellcome men' have been appointed to University Chairs: Dr. C. J. Gaskell, who held a Research Training Scholarship from 1976 to 1979, has been appointed to the Chair of Small Animal Studies at the University of Liverpool; and Dr. Ian McConnell, who held a Research Fellowship from 1970 to 1973, has been appointed to the Chair in Veterinary Pathology at the University of Edinburgh.

In the 13th Report, reference was made to the effects on the activities of the Trust of the Government's measures to reduce public expenditure in the Universities. A downward trend in the number of 'veterinary' applications submitted to the Trust was reported, and concern was expressed about the possibility of a decline in the resources of the Veterinary Schools in the United Kingdom to a level below that necessary for a viable programme of research. During 1980-82, the effects of the financial stringencies became increasingly evident in all the United Kingdom Universities and, in the Veterinary Schools, where Departments are relatively small, indiscriminate and occasionally serious cuts in staff and resources caused

particular difficulties in fulfilling teaching commitments and maintaining research activities. In such circumstances, a further decline in the number of 'veterinary' applications submitted to the Trust might have been anticipated. But, in the event, the number of applications received during 1980-82 was similar to that of the previous biennium.

A list of the grants awarded for research in the field of Veterinary and Comparative Medicine appears on pp. 154-159.

At the last of the six meetings of the Veterinary Advisory Panel held during 1980-82, the Chairman, Lord Swann, referred to the forthcoming retirement of Professor R. H. S. Thompson. In expressing good wishes for a long and happy retirement, Lord Swann reminded members that Professor Thompson's service on the Panel extended over a period of fourteen years and that he had been its first Chairman.

## D. HISTORY OF MEDICINE

### WELLCOME INSTITUTE FOR THE HISTORY OF MEDICINE

While scholarly activities have been expanding at the Institute, developments have occurred behind the scenes which will produce considerable changes in the future and, it is hoped, new opportunities for growth.

The Trustees have now assumed full and direct responsibility for the Institute, which was formerly administered on their behalf by The Wellcome Foundation Ltd. All who work at the Institute are now members of the staff of the Wellcome Trust. The complex planning of this administrative change and its execution were effected on behalf of the Trustees by Mr. Harry Mendelson, former Personnel Director of the Foundation, and Mrs. Iris Sargant. Mr. Mendelson's death soon after the completion of this task was deeply regretted by all who knew him. In order to strengthen their management of the Institute the Trustees have widened the membership of their Institute Committee.

This closer relationship, and the need for the Institute to consider moving to a building of its own, impelled the Trustees to request Dr. P. O. Williams to assume the Directorship of the Institute for a two-year period from 1st September 1981, so that the necessary planning and taking of decisions by the Trustees could proceed in the most rapid and direct manner. Mr. E. J. Freeman was appointed Deputy Director.

In the summer of 1981, the Trustees asked Mr. H. Aldous of The Wellcome Foundation Ltd. to carry out a study of the manpower and efficiency of the Wellcome Institute and make recommendations for any changes that might seem advisable. His report, while recognising the devoted efforts of staff members, drew attention to a number of imperfections associated with both the physical arrangement of the Institute and staffing. In order to maximise the contribution to teaching and research within the budget of the Institute (which the Trustees had resolved to peg, in this time of economic depression, to a figure of one million pounds per annum

expressed in the value of December 1980), and as a consequence of the re-organisation of administrative functions already noted, the Trustees have approved the early retirement of some members of the Institute staff and reluctantly declared others redundant. The Director and all concerned were sorry to say goodbye to these colleagues, especially Mr. Gordon Wilson who had served as Secretary of the Institute for many years.

The Wellcome Building in Euston Road was designed by Sir Henry Wellcome to house his historical collections, medical museum, and research laboratories. It was never intended to be primarily an office building, having been of necessity occupied by The Wellcome Foundation during the last war. In the spring of 1981, the Foundation made known its intention of examining the wisdom of continuing its occupation of the greater part of the Wellcome Building. This announcement made it necessary for the Trustees to consider the housing of the Institute, should a change in the present situation actually occur. In the event, they resolved that there would be great advantage in the Institute's occupying a building arranged to suit its needs, which would also have the effect of leaving the Foundation in clear control of its own Building. A Trustees' Committee has been formed to deal with this matter, expert advisors have been appointed, and there is good hope that a highly suitable block may be purchased very close to the present home of the Institute. A particular advantage to the Library is anticipated by making possible the storage of a larger proportion of its holdings in Bloomsbury, thus increasing their accessibility to readers. Arrangements for meetings at the Institute can also be improved, and there will be other benefits.

Some months after Dr. Williams' appointment as Director, acting on his suggestion, the Trustees formed a Working Party to advise them on the standing of the Wellcome Institute in the world of scholarship, and to prepare a strategic plan to guide the development of the Institute through the next twenty years. The Working Party, consisting of the members of the History of Medicine Advisory Panel together with Professor M. J. S. Rudwick, Sc.D, and Mr. M. W. Hill, M.A, Director of the Science Reference Library (The British

Library), submitted its report in April 1982. Fifteen years had passed since the Trustees last sought guidance from an International Symposium on the support they give to the study of the history of medicine, including the Institute, a meeting which had brought into existence the Academic Units in London, Oxford and Cambridge as well as a broader grant-giving policy. It was clearly appropriate that the structure and functions of the Institute should be reviewed again.

The recommendations of the Working Party were strongly positive. It recognised the outstanding international position of the Library, and the acquisition by the Academic Section of the Institute of a sound reputation which has already attracted many foreign scholars and students. It had no doubt, but that both deserved further strengthening and opportunities for development. Nevertheless, it found a few less than economic ways of doing things, certain weaknesses of definition of purpose, and some anomalies, all of which matters were capable of improvement. The Working Party recommended the creation of new posts in both the Library and the Academic Section, which would open up new fields of activity in scholarship and research, particularly in relation to the recent period of medical history since 1850 and to post-graduate study. It argued that this expansive effort could be paid for by savings elsewhere, not least the cessation of Museum activities from the end of 1982.

All these recommendations were accepted by the Trustees, and a number of them, including the appointment of an Assistant Librarian to specialise in post-1850 materials, have been put into effect already.

Through the deliberations of the Working Party, the Director of the Institute was assisted by an internal 'Committee on Future Plans' which developed a most useful series of suggestions. A standing 'Committee concerned with the Academic Activities of the Institute' has also been set up; this in addition to the Consultative Committee, formed some years ago representing all staff members, which meets bi-monthly.

The present biennium has seen the opening of two splendid Wellcome Galleries at the Science Museum, South Kens-

ington. The first (opened by Sir William Paton, Trustee, in December 1980) is a series of 'shop windows' displaying full-size vignettes of medicine in the past, using authentic Wellcome material whenever possible. The second Gallery (opened by H.R.H. Princess Alexandra in December 1981) is a topically and chronologically arranged selected display of artefacts and materials illustrating all aspects and epochs of medical history. The Science Museum staff have also catalogued a very large number of objects not on display, stored in such a way that they can be examined by scholars. The whole cost of the process of transfer, including cataloguing, which has amounted to almost half a million pounds in the biennium, has been borne by the Trust. The dispersion of material in Sir Henry Wellcome's collections having no relevance to science or medicine has also proceeded: objects have gone as gifts or permanent loans to a long list of public and specialist Museums, including the British Museum. Among the many thousand items, a few rank as additions to the national heritage in art and archaeology of exceptional importance. Extra members of the curatorial staff have been engaged on a temporary basis to bring this work to a conclusion before the end of 1982; since the resignation of Mr. R. de Peyer in June 1982, it has been directed by Miss Georgina Russell.

The Library has been well patronised by scholars and students so that it is sometimes difficult to find a vacant seat. A group of study cubicles has been arranged on Level 1. Dr. Renate Burgess retired as Head of the Iconographic Department in December 1981, being succeeded by Mr. William Schupbach; like Dr. Winder, she is often still to be found in the Library. Mr. H. R. Denham, Chief Cataloguer, also reached the age limit in April 1982; he has been succeeded by Mr. H. J. M. Symons, to whose former post as Assistant Librarian Mrs. Christine English has been appointed. Miss Jeannette Lake has also joined the Library staff with special responsibility for post-1850 materials in the history of medicine.

Reading Room exhibitions have been arranged by staff members on a variety of topics, including botanical illustration, cardiography, Dr. Marie Stopes, Indian and Persian medicine, and Japanese prints. Work on the completion of the

printed catalogue of books printed before 1850 has proceeded, and its extension is in contemplation. The change to automation in cataloguing procedure is also under examination.

The continuing rise in the price of books and periodicals means that, for an expenditure which inevitably tends to increase at a lesser rate, the acquisition of new materials tends to deteriorate. During the biennium over £75,000 was spent on improving the Library's resources. It is hoped to extend further our friendly co-operation with the Royal Society of Medicine whereby books and journals no longer of current interest may be preserved and made generally accessible as historical materials. This may be one way in which the Library will move forward from the remoter to the more recent past, which is increasingly becoming a main focus for historical studies. The trend for general and social historians to consider health and population problems has strengthened this movement.

The Library has also benefited from works carried out by The Wellcome Foundation to improve the conditions under which the most valuable books are kept. An alarming flood on one occasion, fortunately causing no damage, emphasises the need for continued vigilance. An active search for a suitable bookbinder continues.

The membership of the Academic Section of the Institute remains unchanged; it has continued to take part in the teaching of University of London students through the arrangement with University College London, where Dr. Roy Porter has been raised to the honorary rank of Senior Lecturer. A larger number of symposia has been organised during the past two years, on such topics as: the work of Sir Thomas Lewis, the development of psychiatry (to which a very successful weekly seminar was also devoted), Darwinism, and medicine in the scientific revolution. These one-day symposia have been well attended and bring together people of varied backgrounds and diverse interests.

Members of the Academic Section, together with those of the associated Unit at University College London, have been active in publication: the jointly edited *Dictionary of the*

*History of Science* has been published, as has Dr. Roy Porter's *Social History of England in the Eighteenth Century*; Dr. Edwin Clarke's English version of Max Neuberger's *Historische Entwicklung der Experimentellen Gehirn- und Rückenmarkphysiologie* has also appeared, under the title *The Historical Development of Experimental Brain and Spinal Cord Physiology before Flowens*.

Study by students under the direction of the academic staff and by visiting scholars has continued actively, indeed the involvement of this staff in scholarly consultation and other professional activities is such as to press heavily upon their time. The journal *Medical History*, produced by the Institute, is much sought after as a vehicle of publication and maintains its consistent quality, but the extent of the financial subsidy it requires is a matter of some concern.

The Contemporary Medical Archives Centre has recently produced its first Consolidated Accessions List, covering the seventy-odd individual documents or collections of papers processed during the first three-and-a-half years of its existence. The Centre is finding an abundance of material, both individual and corporate; the largest collection so far (Dr. Marie Slopes) fills seventy boxes.

The future direction of the Institute is a matter of grave concern to the Trustees, who are well aware that the appointment of a successor for Dr. Williams in the summer of 1983 is a momentous one. The new Director will have to carry forward a reshaped, independent Institute as a very considerable scholarly enterprise into the closing years of the present century.

#### Staff of the Wellcome Institute for the History of Medicine

Director: P. O. Williams, MB, FRCP (From 1st September 1981)  
 Secretary: G. Wilson, FCSI, FBIM (Until 6th August 1982)

#### Academic Unit:

W. F. Bynum, MD, PhD, Assistant Director of Studies  
 A. Z. Iskandar, DPhil, Medical Historian (Arabic Medicine) (Until 27th July 1981)  
 C. Lawrence, MD, ChB, MSc, Medical Historian (Wellcome Museum)  
 V. Newton, PhD, Medical Historian (Classical Medicine)  
 R. Porter, PhD, Social Historian of Medicine

#### Library:

E. J. Freeman, BA, ALA, Librarian  
 (and Deputy Director from 1st September 1981)  
 R. M. Price, MA, ALA, Deputy Librarian  
 H. R. Denham, FLA, Chief Cataloguer (Until 30th April 1982)  
 N. M. W. T. Allan, PhD, ALA, Assistant Librarian  
 Patricia M. Hill, BA, FLA, Assistant Librarian  
 Brenda Sutton, BA, Assistant Librarian  
 H. J. M. Symons, MA, ALA, Assistant Librarian (Until 30th April 1982)  
 Jeanette Lake, BA, ALA, Assistant Librarian (From 31st August 1982)  
 Christine R. English, BA, ALA, Assistant Librarian (From 9th August 1982)  
 Patricia Hewitt, BA, ALA, Senior Library Assistant  
 Fiona Blackburn, ARCM, GRSM, Library Assistant (Until 25th September 1981)  
 Christine Finch, BA, Library Assistant (From 7th September 1981)  
 Holly Waltringham, BA, Library Assistant (From 1st September 1981)

#### Centre for Contemporary Medical Archives:

Julia Sheppard, BA, Archivist  
 Lesley Hall, BA, Assistant Archivist

#### Alumni:

R. de Peyer, BA, Transfer Officer (Until 25th June 1982)  
 Georgina Russell, MA, Assistant Transfer Officer (Until 30th June 1982)  
 M. S. Truckle, BA, Assistant Transfer Officer (From 1st July 1982)  
 Miranda A. Poliakoff, BA, Assistant Transfer Officer (From 10th May 1981)  
 Joanne M. Whewell, BA, Assistant Transfer Officer (From 23rd February 1981 until 14th May 1982)  
 Iconographic Department:  
 Renée Burgess, PhD, Head (Until 31st December 1980)  
 W. M. Schupbach, MA, Senior Assistant (Until 31st December 1980)  
 Ehid M. Slater, BSc, Assistant  
 Head (From 1st January 1981)

Note:  
Interim Arrangements:

*Acting Head:* E. J. Freeman, BA, ALA  
(From 1st January 1980 until 30th September 1980)

*Chairman (Part-time):* A. R. Hall, LittD, FBA

*Management Committee:* W. F. Bynum, MD, PhD  
E. J. Freeman, BA, ALA  
G. Wilson, FCIS, FBIM

} From  
1st October 1980  
until  
31st August 1981

## UNITS IN THE HISTORY OF MEDICINE

### *University of London*

As in previous years, the Unit of History of Medicine at University College (Head: Dr. W. F. Bynum) has worked in close collaboration with the Academic Section of the Institute. There have been no staff changes, but the diminution of the University Grants Committee support to the Universities has necessitated a reduction in the College's allocation to the Unit. The Trustees now support Dr. Bynum's Research Assistant, and have provided a number of studentships for those taking the Intercalated B.Sc. Course in the History of Medicine. The teaching programme for undergraduates has remained unchanged; that for senior scholars has been widened, as already noted in connection with the Institute. Many occasional lectures have also been delivered by the staff. The studies of about fifteen research students have been supervised, and four Ph.D. degrees have been awarded.

### *University of Oxford*

Under the direction of Dr. Charles Webster, the Unit for the History of Medicine has continued to attract support from outside bodies, most recently a grant of £50,000 from the Imperial Cancer Research Fund in order to write its history. The number of distinguished visitors has also continued to increase. The staff of the Unit is unchanged, except that Mr. Jonathan Barry (St. John's College) is now Research Assistant. Dr. I. S. L. Loudon, Research Associate, was awarded a Wellcome Fellowship in order to continue his work on the history of the dispensary movement, and a similar award has been made to Dr. R. J. Cooter. Dr. Webster, besides continuing his work on the official *History of the National Health Service, 1945-1955*, delivered the Eddington Lectures at Cambridge (in press). A collective volume, edited by him under the title *Biology, Medicine and Society, 1840-1940*, appeared in 1981. Dr. Margaret Pelling has continued her studies of sixteenth and seventeenth century Medical Practitioners in London and East Anglia; Dr. Walter Pagel's volume on J. B. von Helmont, now in press, was edited

by her. Besides much other publication, the staff of the Unit have collaborated with Oxford clinicians in a number of activities. The pattern of participation in University teaching has continued with little change. Six students have been awarded Ph.D degrees during the biennium.

#### *University of Cambridge*

The staff of the Unit under Dr. R. K. French remains the same. Dr. Ian M. Lonie joined it as a Wellcome Research Fellow in January 1981 and is working with Dr. Andrew Cunningham in a study of Hippocrates in the Renaissance. Mr. A. F. Wilson and Mr. G. L. Rubinstein have been elected to Fellowships to begin in the academic year 1982-83. Mr. Wilson will be working on eighteenth-century British Midwifery, and Mr. Rubinstein on Classical Methodism. The pattern of University teaching, otherwise unaltered, has been enriched by an M.Phil. course on the History of Medicine, and a 36-lecture elective course for students in the Medical Sciences Tripos. The last option attracted seventeen students when first offered. At Addenbrooke's Hospital, Mrs. Olivia Brown mounted a new exhibition (with the loan of Wellcome material) on 'Therapeutics from the Seventeenth to the Nineteenth Century'. A number of articles have been published by members of the Unit; Dr. French has published a book on the history of cider.

#### GRANTS IN SUPPORT OF THE HISTORY OF MEDICINE

Continuing inflation and increasing pressure on University resources have brought about an increase in the number of requests for assistance in historical studies. Moreover, more historians interested in health as an aspect of social history have turned towards the Wellcome Trust, which has developed a common frontier of support with the Social Science Research Council. In the period of this Report over £370,000 was expended on Research Fellowships and assistance in research, while almost £24,000 was devoted to Research Training Scholarships. Much of the work supported was carried out in the Wellcome Institute and in those

Universities where activity in the history of medicine is directly supported by the Trust.

Major awards were made to twenty-two post-doctoral scholars and four postgraduate students. Thirty-three lesser grants in aid of research or publication were made.

One-day meetings of recipients of grants were held in June 1981 and June 1982, to enable them to speak of their work before an audience of Trustees, Panel members, Institute staff, students and others. An interesting group of short papers was produced on each occasion, making evident the high quality and original tone of the historical work supported by the Trust.

The History of Medicine and Science Unit of the University of Edinburgh has continued to receive support, by way of a Lecturership in the History of Medicine granted to Mr. Malcolm Nicolson for three years from October 1980, and a number of post-doctoral Fellowships.

Grants awarded for research in the History of Medicine during the two-year period of this Report are listed on pp. 160-163.

## E. MEDALS AND PRIZES

### ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES OF AMERICA

The Sir Henry Wellcome Medal and Prize, instituted by Sir Henry Wellcome in 1916, is awarded annually by the Council of the Association of Military Surgeons of the United States of America, Washington, D.C. The recipients are Medical Officers of the Armed Forces of the United States of America or of the U.S. Public Health Service; the medal and prize are awarded for an essay or report on original research dealing with military applications of medicine.

- 1981 **Lieutenant Colonel Oscar M. Jardon, MC, U.S. Air Force:** for his essay entitled 'Physiologic Stress, Heat Stroke, Malignant Hyperthermia—A Perspective'.
- 1982 **Brigadier General Robert M. Hardaway, III, MD, U.S. Army (Retired):** for his essay entitled 'Wartime Treatment of Shock'.

### THE ROYAL ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND

The Wellcome Medal for Anthropological Research was instituted by Sir Henry Wellcome in 1931. In 1978, following a gap of twelve years, and discussions with the Royal Anthropological Institute, the Trustees agreed to revive the award as a biennial medal to be known as The Wellcome Medal for Research in Anthropology as Applied to Medical Problems. Medal winners also receive a prize of £200. This medal was awarded in 1982 to

**Professor Alan Harwood, University of Massachusetts, Boston, U.S.A.** on account of his books entitled 'R: Spiritist as Needed: A Study of a Puerto Rican Community Mental Health Resource' and 'Witchcraft, Sorcery and Social Categories among the Sufwa' (of Tanzania), and for the compilation and editing of 'Ethnicity and Medical Care'.

### THE BIOCHEMICAL SOCIETY

The Wellcome Trust Award for Research in Biochemistry Related to Medicine was instituted in 1977 and the first

biennial award was made in 1978. This award is intended to recognise distinguished research in the field of biochemistry which leads to new advances in medical science by biochemists under the age of 45 years. Such work must normally have been published in the United Kingdom or Ireland during the seven years preceding the date of nomination.

The Wellcome Trust Award Committee decided that no biennial award should be made in 1980 but that the £500 could be held over for award in 1981. The award for 1981 was made to

**Dr. K. B. M. Reid, Department of Biochemistry, University of Oxford.** Dr. Reid delivered a lecture entitled 'Activation and Control of the Two Pathways of the Human Complement System' at the meeting of the Biochemical Society held at University College, Dublin, on 26th March 1982.

#### IV LISTS OF RESEARCH GRANTS OVER £2,000

##### A. SUPPORT OF MEDICAL RESEARCH IN THE U.K.

##### I SPECIAL FELLOWSHIPS AND SENIOR LECTURERSHIPS

###### SPECIAL FELLOWSHIPS

##### a) Wellcome Senior Research Fellowships in Clinical Science

*New Wellcome Senior Research Fellowships in Clinical Science awarded 1980-82*

**Dr. A. C. Chu, Department of Medicine, Royal Postgraduate Medical School, London:**

Fellowship for five years, including technical assistance, equipment and expenses, for a study of epidermal T cell interactions in physiological and disease states, under *Professor D. K. Peters*.

**Dr. P. D. Home, Department of Clinical Biochemistry and Metabolic Medicine, University of Newcastle upon Tyne:**

Fellowship for five years, including technical assistance, equipment and expenses, for studies on the metabolic effects of hyperinsulinaemia in man and rat, under *Professor K. G. M. M. Alberti*.

**Dr. P. W. Jones, Department of Medicine, Middlesex Hospital Medical School, London:**

Fellowship in five years, including technical assistance and expenses, for a study of cardiac output as a controller of ventilation in health and disease, under *Professor S. J. G. Semple*.

**Dr. R. D. G. Leslie, Diabetic Department, King's College Hospital Medical School, London:**

Fellowship for five years, including technical assistance, equipment and expenses, for a study of non-insulin-dependent diabetes in families, under *Dr. D. A. Pyke*.

**Dr. J. MacDermot, Department of Clinical Pharmacology, Royal Postgraduate Medical School, London:**

Fellowship for five years, including expenses, for pharmacological studies of pulmonary mast cell mediators, under *Professor C. T. Dollery*.

**Dr. A. M. McGregor, Department of Medicine, Welsh National School of Medicine, Cardiff:**

Fellowship for five years, including research expenses, to study the production, characterisation and use of human monoclonal antithyroid antibodies, under *Professor R. Hall*.

**Dr. J. M. Neuberger, Liver Unit, King's College Hospital Medical School, London:**  
Fellowship for three years, for investigations into immune-mediated hepatotoxicity induced by xenobiotics, under *Dr. R. Williams*.

**Dr. P. C. Rubin, Department of Materia Medica, University of Glasgow:**  
Fellowship for two years, including equipment, for an investigation of the optimisation of drug use in pregnancy and the management of pregnancy-associated hypertension, under *Professor J. L. Reid*.

**Dr. J. A. Summerfield, Department of Medicine, Royal Free Hospital School of Medicine, London:**

Fellowship for two years, including expenses, to study the factors modulating a carbohydrate-mediated glycoprotein recognition system on hepatic sinusoidal cells, under *Professor Dame Sheila Sherlock*.

*Additional grants awarded to existing holders of Wellcome Senior Research Fellowships in Clinical Science:*

**Dr. R. J. M. Lane, Muscular Dystrophy Laboratories, Newcastle upon Tyne University Medical School:**

Grant for the purchase of equipment, for use during his fellowship, to study Duchenne muscular dystrophy, under *Professor Sir John Walton*.

**Dr. Eileen D. Rubery, Department of Clinical Biochemistry, University of Cambridge:**

Research expenses for two years, during her fellowship, to study human cell culture for the production of protein, under *Professor C. N. Hales*.

**Dr. H. C. Thomas, Department of Medicine, Royal Free Hospital School of Medicine, London:**

Research assistance and expenses for two years, during his fellowship, to study the mechanisms of elimination of viruses in patients with chronic active hepatitis, under *Professor Dame Sheila Sherlock*.

**Dr. A. I. Weir, Department of Neurology, Institute of Neurological Sciences, University of Glasgow:**

Grant for travel expenses and subsistence, to visit the Mayo Clinic in the U.S.A., during his fellowship, to study motor endplates of human muscle, under *Professor J. A. Simpson*.

**b) Wellcome Senior Research Fellowships in Basic Biomedical Sciences**

*Extensions and additional grants awarded to existing holders of Wellcome Senior Research Fellowships in Basic Biomedical Sciences:*

**Dr. J. Allan, Department of Biophysics, King's College, University of London:**  
Research expenses, during his fellowship, to study the mechanism and control of chromatin transcription, under *Professor M. H. F. Wilkins*.

**Dr. M. J. Dowdall, Department of Biochemistry, University of Nottingham:**  
Extension of his fellowship for one year, to study the biochemistry and pharmacology of acetyl choline release, under *Professor J. N. Hawthorne*.

**Dr. Evelyn Jaros, Regional Neurological Centre, University of Newcastle upon Tyne:**

Grant to purchase a microscope, for use during her fellowship, to study cellular interactions in the peripheral neuromuscular system in normal and diseased animals, under *Professor Sir John Walton*.

**Dr. C. W. Penn, Department of Microbiology, University of Birmingham:**

Research expenses for one year, during his fellowship, to study the determinants of the pathogenicity of treponemes, under *Professor H. Smith*.

**Dr. R. W. Swann, Department of Anatomy, Bristol University Medical School:**

Extension of his fellowship, and technical assistance, for two years, to study the biosynthesis of neurohypophysial hormones and their related neurophysins: studies with tumour tissue, under *Professor B. T. Pickering*.

**Dr. C. P. Winlove, Physiological Flow Study Unit, Imperial College of Science and Technology, University of London:**

Extension of his fellowship for six months, to study vascular mechanics and mass transport, under *Professor C. G. Caro*.

**c) Wellcome Research Fellowships in Surgery**

**Mr. D. Alderson, Department of Surgery, University of Newcastle upon Tyne:**

Fellowship for two years, to study pancreatic islet cell autographs following long-term cryopreservation in dogs, under *Professor I. D. A. Johnston*.

**Mr. A. R. Berry, Department of Clinical Surgery, Edinburgh University Medical School:**

Fellowship extension for three months, to study the effects of acute pancreatitis on the respiratory system, under *Professor A. P. M. Forrest*.

**Mr. J. G. R. Cumming, Department of Surgery, University of Dundee:**

Fellowship and research expenses for two years, to undertake a clinical and experimental evaluation of the pancrealauryl test, under *Professor A. Cuschieri* and *Mr. R. A. B. Wood*.

**Mr. T. C. B. Dehn, Surgical Professorial Unit, St. Bartholomew's Hospital Medical College, London:**

Fellowship for one year, to study the role of carotid endarterectomy in the management of hypertension, under *Professor G. W. Taylor*.

**Mr. J. M. J. Dixon, Department of Clinical Surgery, Edinburgh University Medical School:**

Fellowship for two years, for an investigation into factors involving breast secretions, with particular reference to DHA sulphate, under *Professor A. P. M. Forrest*.

**Mr. G. N. Dutton, University Eye Department, University of Glasgow:**  
Fellowship for two years, to study morphological and immunological aspects of experimentally-induced toxoplasmic chorio-retinitis in the mouse, under *Professor W. S. Foulds* and *Professor W. R. Lee*.

**Mr. P. H. Harper, Nuffield Department of Surgery, University of Oxford:**  
Fellowship for two years, to study the antigenic properties of small bowel contents on the colon, in Crohn's colitis, under *Professor P. J. Morris*.

**Mr. G. S. McIntosh, Academic Department of Surgery, Royal Free Hospital School of Medicine, London:**  
Fellowship for one year, for a study of *in situ* cryodestruction of the pancreas, under *Professor K. E. F. Hobbs*.

**Mr. G. A. D. McPherson, Department of Surgery, Royal Postgraduate Medical School, London:**  
Fellowship extension for six months, to study some surgical aspects of biliary tract obstruction in man, under *Professor L. H. Blumgart*.

**Mr. T. R. Terry, Department of Surgery, St. George's Hospital Medical School, London:**  
Fellowship for two years, to study the pathogenesis and specific chemotherapy of acute necrotising pancreatitis, under *Professor J. Hermon-Taylor*.

**Mr. D. F. M. Thomas, Department of Paediatric Surgery, Institute of Child Health, London:**  
Fellowship for eighteen months, to study the possible role of toxigenic clostridia in the aetiology of necrotising enterocolitis of the newborn, under *Professor L. Spitz*.

**Mr. H. C. Umpleby, Department of Surgery, University of Bristol:**  
Fellowship for two years, for studies of immune response blocking factors on the surface of lymphocytes infiltrating colorectal cancer, under *Professor R. C. N. Williamson*.

#### **d) Wellcome Research Fellowships in Pathology**

**Dr. I. N. Crispe, Department of Zoology, School of Medicine, University College London:**  
Fellowship for three years, to study the role of the major histocompatibility complex of the mouse in guiding T cell subsets, under *Professor N. A. Mitchison*.

**Dr. M. J. Galloway, Department of Haematology, University of Liverpool:**  
Fellowship for two years, to study the significance of haemostatic activation in malignant disease, under *Professor A. J. Bellingham*.

**Dr. K. C. Gatter, Nuffield Department of Pathology, University of Oxford:**  
Fellowship for two years, for a study of the ultrastructural localisation of antigens by monoclonal antibodies, under *Professor J. O'D. McGee*.

**Dr. R. J. L. Hooper, Department of Chemical Pathology, St. Bartholomew's Hospital Medical College, London:**  
Fellowship extension, and expenses, for six months, for studies on serotonin and other brain indoles in selected physiological and pathological conditions, under *Professor J. Landon*.

**Dr. D. C. Litch, Department of Haematology, School of Medicine, University College London:**  
Fellowship extension for two years, to study the development of the human haemopoietic system, under *Professor E. R. Huehns*.

**Dr. I. Lindsay, Department of Histopathology, Royal Free Hospital School of Medicine, London:**  
Fellowship for three years, to study mechanisms of hepatic necrosis, under *Professor P. J. Scheuer*.

**Dr. Mary N. Sheppard, Department of Histopathology, Royal Postgraduate Medical School, London:**  
Fellowship and research expenses for three years, to study regulatory peptides in lung disease, under *Dr. Julia M. Polak*.

**Dr. S. W. Walker, Department of Human Metabolism and Clinical Biochemistry, University of Sheffield:**  
Fellowship for three years, to undertake biochemical studies of hormone actions, under *Professor R. G. Russell* and *Dr. B. L. Brown*.

#### **e) Wellcome Research Training Fellowships in Clinical Epidemiology**

**Dr. S. B. J. Ebrahim, Department of Community Health, University of Nottingham:**  
Research Training Fellowship for three years, for a study of stroke patients, with particular reference to assessment, care and follow up, under *Professor M. Elwood* and *Professor T. H. D. Arie*, Department of Health of the Elderly.

**Dr. P. Elliott, Department of Medicine, St. Mary's Hospital Medical School, London:**  
Research Training Fellowship for three years, for a study of the differences in blood pressure in two ethnic groups of city-dwellers in the United Kingdom, under *Professor W. S. Peart*, and *Professor G. A. Rose*, London School of Hygiene and Tropical Medicine.

**Dr. A. J. Hall, Department of Medicine, University of Southampton:**  
Research Training Fellowship for three years, for a study of the epidemiology of Perthes Disease, under *Professor R. Wright* and *Professor E. D. Acheson*.

**Dr. Kay-Tee Khaw, Division of Epidemiology, University of California, San Diego, U.S.A.:**  
Extension of her Fellowship for one year, to continue her studies on the epidemiology of hypertension, under *Professor Elizabeth Barrett-Connor*.

**Dr. R. F. A. Logan, Department of Therapeutics, University of Nottingham:**  
Research Training Fellowship for three years, for a study of the epidemiology of inflammatory bowel disease, under *Professor M. J. S. Langman*, and *Professor M. Elwood*, Department of Community Health. (Revised Award)

**Dr. Luise Parsons, Department of Environmental and Preventive Medicine, St. Bartholomew's Hospital Medical College, London:**  
Research Training Fellowship for one year, to enable her to pursue the post-graduate course in Epidemiology at the London School of Hygiene and Tropical Medicine.

#### SENIOR LECTURERSHIPS

#### Current holders of Wellcome Senior Lecturerships in Medical and Veterinary Sciences

**Dr. J. K. Aronson, Department of Clinical Pharmacology, University of Oxford:**  
Senior Lecturership for five years, to study the application of methods of assessing the biochemical pharmacological effects of drugs to the study of disease and its treatment, under *Professor D. G. Grahame-Smith*.

**Dr. Jennifer M. Blackwell, Ross Institute of Tropical Hygiene, London School of Hygiene and Tropical Medicine:**  
Senior Lecturership for five years, to study mouse models of genetically-controlled variation in host response to visceral leishmaniasis and their application in the broader context of communicable disease epidemiology, under *Professor D. J. Bradley*.

**Dr. B. Burchell, Department of Biochemistry, University of Dundee:**  
Senior Lecturership for five years, to study the prediction and prevention of drug-induced illness and carcinogenesis, under *Professor P. B. Garland*.

**Dr. A. J. Camm, Department of Cardiology, St. Bartholomew's Hospital Medical College, London:**  
Senior Lecturership for five years, to study the development of pacing and surgical techniques for the analysis and management of tachycardias, under *Dr. R. A. J. Spurrell*.

**Dr. Anne Cooke, Department of Immunology, Middlesex Hospital Medical School, London:**  
Senior Lecturership for five years, to study the control of autoimmune responses, under *Professor I. M. Roitt*.

**Dr. S. G. Cull-Candy, Department of Biophysics, School of Medicine, University College London:**  
Senior Lecturership for five years, for an analysis of neurotransmitter receptors and synaptic function in the vertebrate central nervous system, under *Professor H. P. Rang*, Department of Pharmacology.

**Dr. P. M. Dean, Department of Pharmacology, University of Cambridge:**  
Senior Lecturership for five years, to study the molecular mechanism of drug-receptor recognition, under *Professor A. W. Cuthbert*.

**Dr. Madeleine E. Desay, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine:**  
Senior Lecturership for five years, to study chronic immune-complex disease, under *Professor A. J. Zuckerman*.

**Dr. M. J. Doenhoff, Department of Medical Helminthology, London School of Hygiene and Tropical Medicine:**  
Senior Lecturership for five years, to study the immunology of schistosomiasis, under *Professor G. Webbe*.

**Dr. D. J. Ewing, Department of Medicine, Edinburgh University Medical School:**  
Senior Lecturership for five years, to study autonomic function in health and disease, under *Professor J. S. Rohson*.

**Dr. Sandra E. Fife, Department of Pharmacology, School of Pharmacy, University of London:**  
Senior Lecturership for five years, to study the pharmacology of experimental anxiety, under *Professor D. A. Brown*.

**Dr. G. C. Ford, University of Basel, Switzerland:**  
Senior Lecturership for five years, for comparative structure-function studies on human and other ferritins, under *Professor Pauline M. Harrison*, Department of Biochemistry, University of Sheffield

**Dr. M. H. N. Golden, Department of Human Nutrition, London School of Hygiene and Tropical Medicine:**  
Senior Lecturership for five years, to study the effects of dietary manipulation on loss of oedema and recovery from malnutrition in children, under *Professor J. C. Waterlow*, and working with *Dr. A. A. Jackson*, Tropical Metabolism Research Unit, University of the West Indies, Kingston, Jamaica.

**Dr. Jean Golding, Department of Child Health, University of Bristol:**  
Senior Lecturership for five years, to carry out a national perinatal pathology survey, under *Professor N. R. Butler*.

**Dr. D. J. Harvey, Department of Pharmacology, University of Oxford:**  
Senior Lecturership for five years, for studies of the drug-metabolising system, particularly with regard to the cytochrome P-450 component, under *Professor Sir William Paton*.

**Dr. R. F. Hess, The Physiological Laboratory, University of Cambridge:**  
Senior Lecturership for five years, to study visual discrimination of spatial phase in normal and amblyopic subjects, under *Professor R. D. Keynes*.

**Dr. Hazel C. Jones, Department of Zoology, University of Hull:**  
Senior Lecturership for five years, for an investigation into the morphology and physiology of the developing cerebrospinal fluid system in rodents with congenital hydrocephalus, under *Professor I. M. L. Donaldson*.

**Dr. S. L. Lightman, Medical Unit, St. Mary's Hospital Medical School, London:**  
Senior Lectureship for four years, to study the central nervous control of posterior pituitary secretion, under *Professor W. S. Peart*.

**Dr. G. A. MacGregor, Department of Medicine, Charing Cross Hospital Medical School, London:**  
Senior Lectureship for five years, to study renin angiotensin in the aldosterone system, and sodium metabolism, in the control of blood pressure, under *Professor H. E. de Wardener*.

**Dr. C. A. Marsden, Department of Physiology and Pharmacology, The Medical School, University of Nottingham:**  
Senior Lectureship for five years, to study the effects of neuroactive peptides and psychoactive drugs on amine release *in vivo*, under *Professor P. H. Fenem*.

**Dr. R. W. Meech, Department of Physiology, Bristol University Medical School:**  
Senior Lectureship for five years, to study the physiology of calcium-hydrogen exchange in molluscan neurones, under *Professor B. Matthews*.

**Dr. M. A. Miles, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**  
Senior Lectureship for five years, for epidemiological studies of Chagas' disease using biochemical and immunological taxonomy, under *Professor W. Peters*.

**Dr. G. M. Murphy, Department of Medicine, Guy's Hospital Medical School, London:**  
Senior Lectureship for five years, to study bile acid metabolism in gastroenterological problems, under *Professor M. H. Lexoof*.

**Dr. M. J. Rennie, Department of Human Metabolism, School of Medicine, University College London:**  
Senior Lectureship for five years, to study the mechanisms underlying muscle protein breakdown and repair in man, in health and disease, under *Professor R. H. T. Edwards*.

**Dr. M. C. Sheppard, Department of Medicine, University of Birmingham:**  
Senior Lectureship for five years, to study the regulation of thyroid-stimulating hormone secretion, under *Professor R. Hoffenberg*.

**Dr. K. Siddle, Department of Clinical Biochemistry, University of Cambridge:**  
Senior Lectureship for five years, to study the structure, function and turnover of the insulin receptor of rat liver plasma membrane, under *Professor C. N. Hales*.

**Dr. A. M. Sillito, Department of Physiology, Birmingham University Medical School:**  
Senior Lectureship for five years, to study the synaptic basis of visual cortical function, under *Professor S. M. Hillan*.

**Dr. R. E. Silman, Department of Reproductive Physiology, St. Bartholomew's Hospital Medical College, London:**  
Senior Lectureship for five years, to study (a) fetal pituitary peptides and parturition, (b) the pineal gland and methoxyindoles, under *Professor T. Chard*.

**Dr. J. G. P. Sissons, Departments of Medicine and Virology, Royal Postgraduate Medical School, London:**

Senior Lectureship for five years, to study virus immunopathology in clinical medicine, under *Professor D. K. Peters* and *Professor A. P. Waterson*.

**Dr. A. Tait, Department of Genetics, University of Edinburgh:**  
Senior Lectureship for five years, for a study of genetics and gene regulation in protozoa, under *Professor J. R. S. Fincham*.

**Dr. D. G. Thompson, Medical Unit and Department of Gastroenterology, The London Hospital Medical College:**

Senior Lectureship for five years, for physiological investigations into the effects of experimentally induced stress upon human gastrointestinal motility and secretion in health and disease, under *Professor R. D. Cohen* and *Professor J. E. Lennard-Jones*, Department of Medicine.

**Dr. S. Tomlinson, Department of Medicine, Sheffield University Medical School:**  
Senior Lectureship for five years, for studies of hormone action and the effects of hormones on gene expression in normal and neoplastic tissue, under *Professor D. S. Munro*.

**Dr. R. D. Ward, Department of Medical Entomology, Liverpool School of Tropical Medicine:**

Senior Lectureship for five years, to study the genetics of phlebotomine sandflies in relation to their role as vectors of *Leishmania*, under *Professor W. W. Macdonald*.

**Dr. H. V. Whelan, Department of Neurophysiology, University of Southampton:**  
Senior Lectureship for five years, for a study of the mechanism of epileptiform activity and its relationship to the physiology and pharmacology of the hippocampus, under *Professor G. A. Kerku*.

*Additional grants awarded to current holders of Wellcome Senior Lectureships in Medical and Veterinary Sciences:*

**Dr. Anne Cooke, Department of Immunology, Middlesex Hospital Medical School, London:**

Technical assistance, expenses and equipment for five years, during her Senior Lectureship, to study the control of autoimmune responses, under *Professor I. M. Roitt*.

**Dr. M. J. Doenhoff, Department of Medical Helminthology, London School of Hygiene and Tropical Medicine, Winches Farm Field Station, St. Albans:**  
Research and technical assistance and research expenses for two years, during his Senior Lectureship, to study the immunological control of hepatotoxicity and parasite egg excretion in experimental *Schistosoma mansoni*: towards a functional definition of schistosoma antigens, under *Professor G. Webbe*.

**Dr. Sandra E. File, Department of Pharmacology, School of Pharmacy, University of London:**

Technical assistance and expenses for three years, during her Senior Lecturership, to study the pharmacology of experimental anxiety, under *Professor D. A. Brown*.

**Dr. M. H. N. Golden, Department of Human Nutrition, London School of Hygiene and Tropical Medicine:**

Research and technical assistance, research expenses and equipment for one year, during his Senior Lecturership, for the establishment of a Trace Element Research Group within the University of the West Indies, to study the effects of dietary manipulation on loss of oedema and recovery from malnutrition in children, under *Professor J. C. Waterlow*, and working with *Dr. A. A. Jackson, Tropical Metabolism Research Unit, University of the West Indies, Kingston, Jamaica*.

**Dr. S. L. Lightman, Medical Unit, St. Mary's Hospital Medical School, London:**

Research assistance, expenses and equipment for three years, during his Senior Lecturership, to study central nervous system control of posterior pituitary secretion, under *Professor W. S. Peart*.

**Dr. C. A. Marsden, Department of Physiology and Pharmacology, The Medical School, University of Nottingham:**

Research assistance, expenses and equipment for five years, during his Senior Lecturership, to study the effects of neuroactive peptides and psychoactive drugs on amine release *in vivo*, under *Professor P. H. Fentem*.

**Dr. M. A. Miles, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**

Technical assistance and equipment for five years, during his Senior Lecturership, for epidemiological studies of Chagas' disease using biochemical and immunological taxonomy, under *Professor W. Peters*.

**Dr. M. J. Rennie, Department of Human Metabolism, School of Medicine, University College London:**

Grant for the purchase of a spectrophotometer, for use during his Senior Lecturership, to study the mechanisms underlying muscle protein breakdown and repair in man, in health and disease, under *Professor R. H. T. Edwards*.

**Dr. K. Siddle, Department of Clinical Biochemistry, University of Cambridge:**

Grant for the purchase of consumables and equipment, for use during his Senior Lecturership, to study the structure, function and turnover of the insulin receptor of rat liver plasma membrane, under *Professor C. N. Hales*.

**Dr. J. G. P. Sissons, Departments of Medicine and Virology, Royal Postgraduate Medical School, London:**

Grant for the purchase of equipment, for use during his Senior Lecturership, to study virus immunopathology in clinical medicine, under *Professor D. K. Peters* and *Professor A. P. Waterson*.

**Dr. A. Tait, Department of Genetics, University of Edinburgh:**

Technical assistance, expenses and equipment for five years, during his Senior Lecturership, for a study of genetics and gene regulation in protozoa, under *Professor J. R. S. Fincham*.

**Dr. S. Tomlinson, Department of Medicine, Sheffield University Medical School:**

Research assistance, equipment and expenses for three years, during his Senior Lecturership, for studies of hormone action and the effects of hormones on gene expression in normal and neoplastic tissue, under *Professor D. S. Munro*.

**Dr. R. D. Ward, Department of Medical Entomology, Liverpool School of Tropical Medicine:**

Technical assistance, research expenses and equipment for two years, during his Senior Lecturership, to study the genetics of phlebotomine sandflies in relation to their role as vectors of *Leishmania*, under *Professor W. W. Macdonald*.

## 2. SUBJECTS SELECTED FOR DEVELOPMENT

### Mental Health

MAJOR AWARD FOR RESEARCH RELATING TO THE UNDERSTANDING OF SPECIFIED PSYCHIATRIC CONDITIONS INVOLVING COLLABORATION BETWEEN CLINICAL AND EPIDEMIOLOGICAL INVESTIGATORS

This award was shared:

**Professor J. R. M. Copeland, Department of Psychiatry, University of Liverpool:** Research and technical assistance and expenses for two years, to study the early detection, causal factors and outcome of mental illness in elderly subjects living at home, with special reference to depression and dementia.

**Professor P. J. Graham, Department of Child Psychiatry, Institute of Child Health, London:** Research assistance and expenses for two years, for an epidemiological investigation into affective disorders and problems of eating control in late adolescence, with *Dr. Naomi Richman*.

**Dr. G. I. Szankler, Department of Psychiatry, Institute of Psychiatry, London:** Research assistance and expenses for two years, for a study of the incidence, early detection and feasibility of some preventive measures in anorexia nervosa.

**Professor A. Wakeling, Department of Psychiatry, Royal Free Hospital School of Medicine, London:** Research and technical assistance for two years, for an epidemiological enquiry into the onset and prevalence of eating disorders, by means of a retrospective study of hospital patients and a prospective study of schoolgirls, with *Dr. A. H. Mann*.

MAJOR AWARD FOR RESEARCH LINKING CLINICAL STUDIES IN ANY SPECIFIED PSYCHIATRIC CONDITION WITH ANY BASIC SCIENCE, INCLUDING THE BEHAVIOURAL SCIENCES

**Professor E. S. Paykel, Department of Psychiatry, St. George's Hospital Medical School, London:** Research assistance, expenses and equipment for five years, for a study of depression, antidepressants and receptor plasticity, with *Professor J. S. Kelly* and *Dr. R. W. Horton*, Department of Pharmacology.

## ACADEMIC DEVELOPMENT

### (1) Senior Lecturerships

**Dr. J. A. O. Besson, Department of Mental Health, University of Aberdeen:** Grant to provide the balance of funds for his support as a Senior Lecturer, and part-time research assistance, for five years, to study alcoholism: early detection and intervention among General Practice attenders, under *Professor G. W. Ashcraft*.

**Dr. C. Q. Mounjoy, Department of Psychiatry, University of Cambridge:** Extension of his University Award at Consultant level for fifteen months, for neuropathological studies in psychiatry, under *Professor Sir Martin Roth*.

### (2) Research Training Posts

**Professor M. G. Gelder, Department of Psychiatry, University of Oxford:** Grant to provide research training posts and expenses over a further period of three years.

### (3) Research Assistance

**Dr. B. H. Anderton, Department of Immunology, St. George's Hospital Medical School, London:** Additional research expenses for six months during his Lecturership, to study neurofilament pathology in senile and pre-senile dementia.

## RESEARCH EQUIPMENT

**Dr. G. H. Jones, Department of Psychological Medicine, Welsh National School of Medicine, Cardiff:** Grant towards the cost of equipment, for studies of the corpus callosum in schizophrenia and other mental disorders, and the correlation of cerebral dominance with recovery from schizophrenia.

**Dr. E. T. Rolfs, Department of Experimental Psychology, University of Oxford:** Grant for the purchase of additional equipment, for use during his study of brain mechanisms of eating and drinking in relation to disorders of eating.

## RESEARCH FELLOWSHIPS

**Dr. Janet M. Allen, Division of Psychiatry, MRC Clinical Research Centre, Northwick Park, London:** Fellowship for three years, to investigate abnormalities of neuropeptides in schizophrenia, depression and dementia, under *Dr. T. J. Crow*.

**Dr. Louise E. Braddock, Department of Psychiatry, University of Oxford:**  
Fellowship and expenses for three years, for a study of clinical, physiological and pharmacological correlates in depression, under *Professor M. G. Gelder*.

**Dr. W. M. Braude, Department of Psychiatry, University of Cambridge:**  
Fellowship and expenses for two years, to undertake an epidemiological survey to determine the characteristics and prevalence of akathisia in a psychiatric in-patient population, under *Professor Sir Martin Roth*.

**Dr. M. H. Briscoe, Biochemical Psychiatry Laboratory, Welsh National School of Medicine, Cardiff:**  
Fellowship for one year, for a study of H-reflex in affective illness: an indicator of serotonin and noradrenaline function, under *Dr. D. M. Shaw*, and working with *Dr. M. H. T. Roberts, Department of Physiology, University College, Cardiff*.

**Mr. D. Dawbarn, MRC Neurochemical Pharmacology Unit, Cambridge:**  
Fellowship for two years, for an investigation of the organisation of peptidergic neurones in basal ganglia, under *Dr. L. L. Iversen*.

**Dr. R. J. Dolan, Department of Psychiatry, Royal Free Hospital School of Medicine, London:**  
Fellowship and expenses for three years, for a study of depressed patients by computer tomography, under *Dr. A. H. Mann*.

**Dr. S. B. Dunnett, Department of Experimental Psychology, University of Cambridge:**  
Fellowship for three years, to study neural tissue transplantation and recovery from brain injury, under *Dr. Susan D. Iversen*.

**Mr. G. Jeffery, Department of Experimental Psychology, University of Oxford:**  
Fellowship and expenses for one year, to study the development and plasticity of visual pathways, under *Dr. V. H. Perry*.

**Dr. C. L. E. Katona, Department of Psychiatry, University of Cambridge:**  
Fellowship for six months, to study the dexamethasone suppression test in schizophrenic illness, under *Professor Sir Martin Roth*.

**Dr. Adrienne M. Reveley, Department of Psychiatry, Institute of Psychiatry, London:**  
Fellowship extension for one year, for continued investigations into the genetic basis of neuropsychological and biochemical factors associated with schizophrenia, under *Dr. R. M. Murray*.

**Dr. S. A. Stansfeld, General Practice Research Unit, Institute of Psychiatry, London:**  
Fellowship for two years, to study noise sensitivity and depressive illness, under *Professor M. Shepherd, Department of Psychiatry*.

#### RESEARCH TRAINING SCHOLARSHIP

**Dr. J. C. Cohen, Department of Biochemistry, Institute of Psychiatry, London:**  
Research training scholarship for one year, to enable him to undertake an MSc course in Neurochemistry, under *Dr. M. J. Brammer*.

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. D. J. K. Balfour, Department of Pharmacology and Therapeutics, University of Dundee:**  
Research expenses and equipment for three years, to study the role of hippocampal 5-HT systems in the anxiolytic properties of diazepam.

**Dr. R. S. J. Briggs, Department of Geriatric Medicine, University of Southampton:**  
Research assistance and expenses for two years, to study the regulation of cholinergic receptors in brain: implications for the treatment of senile dementia.

**Dr. R. S. J. Briggs, Department of Geriatric Medicine, University of Southampton:**  
Research assistance and expenses for three years, to study the role of established and experimental investigative techniques in senile dementia: a clinical, pathological and neurochemical follow-up study, with *Dr. G. N. Woodruff* and *Dr. P. J. Roberts, Department of Pharmacology*.

**Professor A. N. Davison, Department of Neurochemistry, Institute of Neurology, London:**  
Additional research expenses, during his five-year Major Award for Research into Mental Subnormality, to study genetic transcription in the developing brain, its regulation and possible alterations in mental subnormality, with special reference to Down's syndrome, with *Dr. L. Lim*.

**Dr. R. T. Dean, Department of Applied Biology, Brunel University, Uxbridge:**  
Additional research expenses for two years, for his studies of abnormalities of lysosomal function in the mucopolidoses.

**Dr. Jacqueline de Belleruche, Department of Biochemistry, Charing Cross Hospital Medical School, London:**  
Research and technical assistance, expenses and equipment over three years, for a study of the cholinergic innervations of cerebral cortex and hippocampus: their relevance to dementia.

**Dr. P. A. M. Eagles, Department of Biophysics, King's College, University of London:**  
Research assistance for one year, for an investigation of a three-dimensional reconstruction of neurofilaments.

**Professor A. N. Exton-Smith, Department of Geriatric Medicine, School of Medicine, University College London:**  
Extension of research assistance for three months, for studies of the aetiology of dementia.

**Dr. C. P. Freeman, Department of Psychiatry, University of Edinburgh:**  
Research assistance, expenses and equipment for two years, for a study of the treatment of binge eating (bulimia).

**Professor M. G. Gelder, Department of Psychiatry, University of Oxford:**  
Research assistance and expenses for eighteen months, to study the reasons for incomplete response of schizophrenic patients to neuroleptic drugs.

**Professor M. G. Gelder, Department of Psychiatry, University of Oxford:**  
Technical assistance and research expenses for one year, for a neuroendocrine investigation of ECT and other antidepressant treatment.

**Professor D. G. Grahame-Smith, Department of Clinical Pharmacology, University of Oxford:**

Technical assistance, research expenses and equipment for three years, for a study of correlations amongst clinical features, neuroendocrine and platelet function in depressive illness.

**Dr. Susan D. Iversen, Department of Experimental Psychology, University of Cambridge:**

Technical assistance and expenses for three years, for a study of behavioural deficits associated with dopamine lesions.

**Professor J. S. Jenkins, Department of Medicine II, St. George's Hospital Medical School, London:**

Extension of research assistance and expenses for a further year, to study the role of vasopressin in human brain function.

**Professor J. S. Jenkins, Department of Medicine II, St. George's Hospital Medical School, London:**

Research assistance and expenses for three years, to study the localisation and function of neurohypophysial hormones in the central nervous system.

**Dr. R. Kumar, Department of Psychiatry, Institute of Psychiatry, London:**

Research assistance and expenses for one year, for a preliminary investigation of dopaminergic activity in nicotine-tolerant rats.

**Dr. R. M. Murray, Genetics Section, Institute of Psychiatry, London:**

Research assistance for three years, for a combined twin and family investigation of biological markers in schizophrenia, with *Dr. D. W. Fulker*, Department of Psychology, and *Dr. M. Reveley*, Department of Psychiatry, Charing Cross Hospital Medical School, London.

**Dr. R. J. Naylor, School of Studies in Pharmacology, University of Bradford:**

Research assistance and expenses for two years, for a study of mesolimbic dopamine receptors and receptor changes in schizophrenia, and the design of anti-schizophrenic agents, with *Dr. Brenda Costall*.

**Professor M. Sandler, Department of Clinical Pathology, Institute of Obstetrics and Gynaecology, London:**

Research assistance for three years, for an investigation of benzodiazepine-sensitive disease: studies of a new neurochemical system.

**Professor M. Shepherd, Department of Psychiatry, Institute of Psychiatry, London:**  
Extension of research and secretarial assistance for two months, for an investigation into the natural history of neurotic disorders.

**Professor M. Shepherd, Department of Psychiatry, Institute of Psychiatry, London:**  
Extension of research assistance for three months, to study sensitivity to noise and predisposition to mental disorder.

**Dr. A. D. Smith, Department of Pharmacology, University of Oxford:**

Research and technical assistance, expenses and equipment for three years, for an approach to the identification of synaptic connections involved in drug action as a basis for the therapy of psychotic disorders.

**Dr. J. A. Smith, Department of Pharmaceutical Chemistry, University of Bradford:**

Extension of research assistance and expenses for two years, to carry out an assessment of pineal metabolism in schizophrenia.

**Dr. T. W. Stone, Department of Physiology, St. George's Hospital Medical School, London:**

Extension to research assistance, expenses and equipment for three years, to continue his study of the neuronal basis of mental retardation, choreoathetosis and self-mutilation in the Lesch-Nyhan syndrome: a clinical and experimental study.

**Dr. P. F. T. Vaughan, Department of Biochemistry, University of Glasgow:**

Research assistance and expenses for two years, to study receptors for catecholamines in human glial cells in culture, with *Dr. H. B. McNamee*, Alcohol Treatment and Research Unit, Ravenscraig Hospital, Greenock.

**Dr. J. C. Watkins, Department of Pharmacology, Bristol University Medical School:**

Extension of research expenses and equipment for one year, for fundamental studies on the mechanism of amino acid-mediated synaptic excitation in the mammalian central nervous system.

**Dr. D. C. Watt, St. John's Hospital, Aylesbury:**

Additional research assistance and expenses for six months, for a linkage study of 32 blood genetic markers in the families of schizophrenics.

#### SYMPOSIUM SUPPORT

Symposium on 'Regeneration in the Nervous System - Clinical and Neurobiological Correlates'; London, July 1982.

In addition to the grants listed above, several further grants of less than £2,000 each were awarded for research in the field of Mental Health.

## Ophthalmology

### CAPITAL GRANT FOR BUILDING

**Dr. Ruth M. Clayton, Department of Genetics, University of Edinburgh:**

Contribution towards the costs of a building conversion, to provide laboratory accommodation for studies in the genetics of the eye.

### RESEARCH EQUIPMENT

**Professor A. Garner, Department of Pathology, Institute of Ophthalmology, London:**

Contribution towards the cost of a scanning electron microscope, for use in studies in the normal structure of the human eye.

**Dr. Mary J. Voaden, Department of Visual Science, Institute of Ophthalmology, London:**

Contribution towards the cost of equipment, for use in the application of high pressure liquid chromatography to studies of retinal disorders, with *Dr. C. M. Kemp*.

### RESEARCH FELLOWSHIPS

**Dr. Gillian Clover, Institute of Ophthalmology, London:**

Fellowship extension and expenses for one year, to study the clinicopathological correlation of blood retinal barriers in diabetic retinopathy, under *Professor A. C. Bird* and *Professor A. Garner*, Department of Pathology, and *Professor R. A. Weale*, Department of Visual Science.

**Dr. C. F. J. Grindie, Department of Pathology, Institute of Ophthalmology, London:**

Fellowship extension for six months, to study the pathophysiology of ageing in relation to retinal disease, under *Professor A. Garner* and *Professor A. C. Bird*, Department of Visual Science.

**Dr. Susan Lightman, Institute of Ophthalmology, London:**

Fellowship extension for two and a quarter years, for studies in immunological aspects of eye disease, under *Professor Barrie R. Jones*, Department of Preventive Ophthalmology.

**Dr. A. B. Tullo, Department of Microbiology, Bristol University Medical School:**  
Fellowship extension and expenses for one year, to study experimental and clinical aspects of eye disease caused by Herpes simplex virus, under *Dr. T. J. Hill*.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. F. W. Campbell, Department of Physiology, University of Cambridge:**

Research assistance and expenses for two years, to study visual-evoked responses in optic neuritis.

**Dr. D. L. Easty, Department of Ophthalmology, Bristol University Medical School:**

Extension of research assistance and expenses for one year, to study the further development of long-term preservation of human corneas prior to keratoplasty.

**Professor A. Garner, Department of Pathology, Institute of Ophthalmology, London:**

Research expenses and equipment for two years, to study the dysfunction of the blood retinal barrier, with *Dr. J. Marshall*.

**Dr. I. Grierson, Department of Pathology, Institute of Ophthalmology, London:**

Research assistance and expenses for two years, for studies on fibrous vitreal membranes.

**Dr. J. M. Lackie, Department of Cell Biology, University of Glasgow:**

Research assistance and expenses for two years, for an *in vitro* study of cellular infiltration and proliferation in the vitreous of the eye, with *Dr. J. V. Forrester*, Tennent Institute of Ophthalmology.

**Dr. J. G. G. Ledingham, Nuffield Department of Clinical Medicine, University of Oxford:**

Research expenses and equipment for three years, for a study of intraocular pressure changes in hypertension and diabetes.

**Professor W. R. Lee, Tennent Institute of Ophthalmology, University of Glasgow:**

Extension of research assistance and expenses for fifteen months, to study the morphology and function of the extracellular tissues in outflow systems of primate eyes.

**Dr. J. Mellerio, Division of Science, Polytechnic of Central London:**

Research assistance, expenses and equipment for three years and seven months, for an assessment of tissue culture as a means of studying cellular defects in inherited retinal dystrophies.

**Dr. J. M. Tiffany, Nuffield Laboratory of Ophthalmology, University of Oxford:**

Research assistance, equipment and expenses for three years to study the physical and chemical properties of ocular mucus.

**Dr. P. G. Watson, Strangeways Research Laboratory, Cambridge:**

Extension of research assistance and expenses for one year, for investigations into conditions which lead to the destruction of connective tissue in the eye.

## Infectious Diseases

### MAJOR AWARDS FOR RESEARCH INTO INFECTIOUS DISEASES

**Dr. J. Stephen, Department of Microbiology, University of Birmingham:**  
Technical assistance and research expenses for five years, for an investigation of the pathophysiology of rotavirus and *Salmonella* experimental gastroenteritis in parallel with human clinical studies, with *Dr. D. C. A. Candy*, Department of Paediatrics and Child Health, and *Dr. M. P. Osborne*, Department of Physiology.

**Professor D. J. Weatherall, Nuffield Department of Clinical Medicine, University of Oxford:**  
Research and technical assistance, travel and research expenses for four years, for a study of the pathophysiology of the anaemia of infection.

### TRAINING FELLOWSHIPS IN INFECTIOUS DISEASES

**Dr. J. Cohen, Department of Medicine, Royal Postgraduate Medical School, London:**  
Training Fellowship for three years, for studies on endotoxin in the immunocompromised host, under *Professor D. K. Peters*.

**Dr. Maureen B. Duggan, Department of Paediatrics, University of Sheffield:**  
Training Fellowship for two years, for a study of the metabolic and nutritional cost of childhood infectious diseases, under *Professor R. D. G. Milner*.

**Dr. Susan P. Fisher-Hoch, Special Pathogens Reference Laboratory, Public Health Laboratory Service, Centre for Applied Microbiology and Research, Porton Down, Wiltshire:**  
Training Fellowship for two years, for a study of the diagnosis and treatment of acute rabies, and a study of the pathogenesis and control of haemorrhage in viral haemorrhagic fevers, under *Professor D. I. H. Simpson*.

### GRANT FOR RESEARCH EXPENSES

**Professor D. I. H. Simpson, Special Pathogens Reference Laboratory, Public Health Laboratory Service, Centre for Applied Microbiology and Research, Porton Down, Wiltshire:**  
Special grant for research expenses and equipment for two years, for a study of viral haemorrhagic fever.

## Toxicology

### MAJOR AWARD FOR RESEARCH INTO TOXICOLOGICAL MECHANISMS

This award was shared:

**Dr. S. D. Gangoli, Pharmacology Section, British Industrial Biological Research Association, Carshalton:**  
Research assistance, expenses and equipment for two years, for a study of the effects of heavy metals on blood-brain barrier function, with *Dr. S. R. Moorhouse*.

**Dr. E. S. Harpur, Department of Pharmacy, University of Aston in Birmingham:**  
Research assistance, expenses and equipment for three years, for a study of the sites and mechanisms of ototoxicity: the role of melanin.

**Professor C. D. Marsden, Department of Neurology, Institute of Psychiatry, London:**  
Research and technical assistance and expenses for up to five years, for a study of the mechanisms of long-term neurotoxicity of dopamine antagonists and agonists used in the treatment of schizophrenia and Parkinson's disease, with *Dr. P. Jenner*.

**Dr. P. J. Roberts, Department of Physiology and Pharmacology, University of Southampton:**  
Research assistance, expenses and equipment for two years, for a study of the mechanisms of excitotoxicity (neuroexcitatory cytotoxicity) and their involvement in neurological diseases.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor J. W. Bridges, Robens Institute of Industrial and Environmental Health and Safety, University of Surrey:**  
Research and technical assistance for two years, to investigate the role of gut microflora in the metabolism of xenobiotics and its significance in toxicological tests.

**Professor J. R. Bronk, Department of Biology, University of York:**  
Technical assistance, expenses and equipment for three years, for an investigation of the absorption and actions of cytotoxic purines and pyrimidines in the rat small intestine.

**Dr. R. C. Elliott, Department of Applied Biology, Brunel University, Uxbridge:**  
Research expenses and equipment for three years, to study the pharmacology of *Tealnia felina* toxin.

**Dr. A. L. Harvey, Department of Physiology and Pharmacology, University of Strathclyde:**  
Research assistance and expenses for two years, to investigate neurotransmitter release using facilitatory toxins.

**Dr. D. Wray, Department of Pharmacology, Royal Free Hospital School of Medicine, London:**

Contribution towards the cost of research assistance, expenses and equipment, to investigate the use of botulinum neurotoxin as a probe to study neuromuscular transmissions by electrophysiological and biochemical methods, with *Dr. J. O. Dolly, Department of Biochemistry, Imperial College of Science and Technology, University of London.*

### 3. SUPPORT OF UNIVERSITY RESEARCH

#### CLINICAL SCIENCES

##### Cardiology

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. K. J. Broadley, Division of Applied Pharmacology, Welsh School of Pharmacy, University of Wales Institute of Science and Technology, Cardiff:**

Technical assistance and research expenses for two years, for a study of coronary autoregulation—mechanisms and identity of the mediator.

**Professor D. G. Grahame-Smith, Department of Clinical Pharmacology, University of Oxford:**

Extension of research assistance for six months, to study the effects of stopping digoxin therapy in patients on established long-term treatment.

**Dr. J. P. Lavender, Department of Diagnostic Radiology, Royal Postgraduate Medical School, London:**

Research expenses for three years, to study regional cerebral blood flow using Krypton 81 m.

##### Clinical Immunology

#### UNIVERSITY AWARD

**Dr. A. J. Pinching, Department of Immunology, St. Mary's Hospital Medical School, London:**

University Award for two years, for studies on phagocyte function in man, under *Professor P. Richards, Department of Medicine.*

#### RESEARCH TRAINING SCHOLARSHIP

**Mr P. N. Uzoegwu, Nigerian Institute for Trypanosomiasis Research, Vom, Plateau State, Nigeria:**

Research training scholarship for one year, for a study of the interactions between constituents of trypanosome mitochondria and anti-mitochondrial antibodies of normal subjects and of subjects with primary biliary cirrhosis, under *Professor H. Baum, Department of Biochemistry, Chelsea College, University of London.*

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. J. K. Aronson, Department of Clinical Pharmacology, University of Oxford:** Research assistance and expenses for six months, to study the effects of hypertension on cardiac glycoside receptor functions in patients' lymphocytes.

**Dr. G. F. Bottazzo, Department of Immunology, Middlesex Hospital Medical School, London:**

Technical assistance, research expenses and equipment for one year, to study the growth promoting and blocking antibodies to thyroid stimulating hormone receptors in the pathogenesis of autoimmune thyroid disorders.

**Professor L. Brent, Department of Immunology, St. Mary's Hospital Medical School, London:**

Research assistance, expenses and equipment for three years, for an investigation of the parameters affecting the transplantation of allogenic haemopoietic cells to the human fetus.

**Professor R. V. Calne, Department of Surgery, University of Cambridge:**

Technical assistance, research expenses and equipment for three years, to investigate the clinical relevance of Cyclosporin A in blood levels in transplant recipients, with *Dr. D. J. G. White*.

**Dr. F. Carswell, Department of Child Health, University of Bristol:**

Extension of research assistance and expenses for three months, for a study of immediate hypersensitivity in rat lung, and its relevance to human asthma.

**Professor E. J. Holborow, Bone and Jolt Research Unit, The London Hospital Medical College:**

Research assistance and expenses for one year, for an investigation into the action of autoantibodies against intermediate filaments, found in certain virus infections, infectious mononucleosis and rheumatoid arthritis.

**Dr. P. Hughes, Academic Division of Medicine, University of Sheffield:**

Additional research expenses, for his study of tissue-damaging mechanisms in systemic sclerosis.

**Dr. D. J. Jeffries, Department of Virology, St. Mary's Hospital Medical School, London:**

Research and technical assistance, research expenses and equipment for three years, to study the immunopathology of rashes attributed to drug hypersensitivity, with *Dr. J. F. Ackroyd*, Medical Unit, and *Dr. H. Valdimarsson*, Department of Immunology.

**Professor P. J. Lachmann, Department of Pathology, University of Cambridge:**

Extension of research assistance and expenses for ten months, to study the immune responses to measles and distemper virus.

**Professor N. A. Mitchison, Human Tumour Immunology Group, School of Medicine, University College London:**

Technical assistance, research expenses and equipment for two years, for an investigation into cellular interactions and regulation of antibody responses in man, with *Dr. P. C. L. Beverley*.

**Professor I. M. Roitt, Department of Immunology, Middlesex Hospital Medical School, London:**

Technical assistance, research expenses and equipment for two years, for an investigation of the control of Epstein-Barr virus-induced activation of human B lymphocytes from healthy individuals, patients with rheumatoid arthritis and their families, with *Dr. P. M. Lydyard* and *Dr. W. L. Irving*.

**Dr. K. I. Welsh, Department of Haematology, Guy's Hospital Medical School, London:**

Research expenses for one year, for studies on HLA and disease.

**Dr. Roger Williams, Liver Unit, King's College Hospital and Medical School, London:**

Extension of research assistance for two years, for further studies on serum autoantibodies reacting with liver-specific membrane lipoprotein (LSP) in chronic liver disease: an investigation of antigenic specificities of autoantibodies in relation to diagnosis and assessment of possible pathogenetic implications in chronic active liver disease.

## Clinical Pharmacology

### RESEARCH FELLOWSHIP

**Dr. S. F. M. Grimmer, Department of Pharmacology and Therapeutics, University of Liverpool:**

Special Fellowship and expenses for two years, for a clinical pharmacological study of contraceptive steroids - the importance of the gut wall, under *Professor A. M. Breckenridge*.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor P. S. Seter, Department of Clinical Pharmacology and Therapeutics, St. Mary's Hospital Medical School, London:**

Extension of research assistance and expenses for two and a quarter years, for studies on the sulphoconjugation of catecholamines: possible biological roles for sulphate conjugates.

**Professor R. L. Smith, Department of Biochemical and Experimental Pharmacology, St. Mary's Hospital Medical School, London:**

Additional research expenses for eighteen months, for an investigation into the occurrence of polymorphisms of drug oxidation in man, and their clinical significance.

## Dentistry

### GRANT FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. F. P. Ashley, Department of Periodontology and Preventive Dentistry, Guy's Hospital Medical School, London:**

Technical assistance and expenses for one year, to study the effect of a school-based plaque control programme on the microbiology of dental plaque.

## Dermatology

### LECTURERSHIP

**Dr. Jaya L. Naidoo, Department of Bacteriology, Institute of Dermatology, London:**

Lecturership, technical assistance and research expenses for three years, to study the transfer and maintenance of plasmid genes in skin bacteria, under *Professor W. C. Noble*.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. R. D. R. Camp, Institute of Dermatology, London:**

Research assistance, expenses and equipment for two years, for a study of mediators of the acute inflammatory response in human skin.

**Professor F. J. B. Ebling, Department of Zoology, University of Sheffield:**

Extension of research assistance for six months, for a study of the fate and metabolism of androgens in target organs of the skin.

**Dr. L. Fry, Department of Dermatology, St. Mary's Hospital Medical School, London:**

Additional research expenses for two years, to study the immunopathology of psoriasis, with *Dr. H. Valdimarsson*, Department of Immunology.

**Professor G. P. Lewis, Institute of Basic Medical Sciences, Royal College of Surgeons, London:**

Research assistance and expenses for three years, for an investigation of the interactions between inflammatory mediators and the microvasculature during allograft rejection.

**Professor I. A. Magnus, Department of Photobiology Institute of Dermatology, London:**

Research assistance for two years, for a study of porphyrin concentration in the skin in porphyria.

**Dr. W. C. Noble, Department of Bacteriology, Institute of Dermatology, London:**

Extension of research and technical assistance and expenses for one year, to study the ecological genetics of *Staphylococcus aureus*.

**Professor S. Schuster, Department of Dermatology, University of Newcastle upon Tyne:**

Research and technical assistance, expenses and equipment for two years, for a study of the aryl hydrocarbon hydroxylase activity and the aetiology of psoriasis, with *Professor M. D. Rawlins*.

**Professor N. A. Wright, Department of Histopathology, Royal Postgraduate Medical School, London:**

Extension of research and technical assistance and expenses for one year, to study cell proliferation in psoriasis in relation to its treatment.

## Endocrinology

### RESEARCH EQUIPMENT

**Professor D. N. S. Kerr, Department of Medicine, University of Newcastle upon Tyne:**

Contribution towards the cost of equipment, for a study of growth hormone secretion and action in normal and disease states in man.

### RESEARCH LEAVE FELLOWSHIP

**Dr. S. L. Lightman, Medical Unit, St. Mary's Hospital Medical School, London:**

Research Leave Fellowship for one year, to study central nervous control of posterior pituitary secretion.

### RESEARCH FELLOWSHIPS

**Dr. I. N. Ferrier, Department of Histochemistry, Royal Postgraduate Medical School, London:**

Special Fellowship and expenses for three years, to study the central nervous system and hypothalamic regulation of gonadotropin secretion in man and psychotic patients employing immunohistochemical and neuroendocrine strategies, under *Dr. Julia M. Polak*, and *Dr. T. J. Crow*, Division of Psychiatry, MRC Clinical Research Centre, Northwick Park, London.

**Dr. M. J. A. Maresh, Department of Obstetrics and Gynaecology, St. Mary's Hospital Medical School, London:**

Special Fellowship for one year, to study the comparison of insulin against diet in the management of chemical diabetes in pregnancy, under *Professor R. W. Beard*.

**Dr. T. J. Wilkin, Professorial Medical Unit, University of Southampton:**

Special Fellowship for two years, to study the development and clinical application of two new techniques for the assay of human thyroid stimulating and growth immunoglobulins, under *Professor R. Wright*.

## GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. P. E. Beichetz, Department of Medicine, University of Liverpool:**  
Research assistance, expenses and equipment for three years, to investigate the cause of pulsatile gonadotropin release in the ovariectomised guinea pig.

**Dr. H. M. Charlton, Department of Human Anatomy, University of Oxford:**  
Technical assistance and expenses for two years, for studies on the effects of gonadotropin releasing hormone (GnRH) injections and hypothalamic transplantation in the hypogonadal mouse.

**Professor C. R. Edwards, Department of Medicine, University of Edinburgh:**  
Research assistance for two years, to study biological principles affecting steroidogenesis.

**Dr. C. W. Havard, Department of Endocrinology, Royal Free Hospital School of Medicine, London:**  
Extension of research assistance and expenses for one year, to investigate the role of the thymus in myasthenia gravis.

**Dr. J. A. Hughes, Department of Child Health, Welsh National School of Medicine, Cardiff:**  
Research assistance and expenses for two years, to investigate disorders of sexual differentiation with syndromes of androgen resistance.

**Dr. G. Russell, Department of Child Health, University of Aberdeen:**  
Research assistance and expenses for six months, for a study of carbohydrate and other metabolism in pregnancy and the newborn.

**Dr. J. D. H. Slater, Thorn Institute of Clinical Science, Middlesex Hospital Medical School, London:**  
Research assistance and expenses for one year, to study aldosterone and its metabolites in hypertension.

**Dr. T. C. B. Stamp, Institute of Orthopaedics, Royal National Orthopaedic Hospital, Stanmore:**  
Research expenses for three years, for a study of vitamin D metabolites in disorders of calcium endocrinology and bone disease.

## Gastroenterology

### RESEARCH FELLOWSHIP

**Dr. Deirdre A. Kelly, Department of Medicine, Trinity College, Dublin, Eire:**  
Fellowship and expenses for one year, to study a glucose-sensitive glycoprotein recognition system in the liver, under *Dr. J. Summerfield, Academic Department of Medicine, Royal Free Hospital School of Medicine, London.*

## RESEARCH TRAINING SCHOLARSHIP

**Dr. M. Hasan, Gastrointestinal Unit, Western General Hospital, University of Edinburgh:**  
Research training scholarship for five months, to study the clinical, endoscopic and mucosal biopsy features of non-specific duodenitis, under *Dr. W. Sircus.*

## GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. V. S. Chadwick, Department of Medicine, Royal Postgraduate Medical School, London:**  
Research assistance and expenses for two years, for studies of intestinal permeability in human neonates.

**Dr. V. S. Chadwick, Department of Medicine, Royal Postgraduate Medical School, London:**  
Research assistance and expenses for one year, for studies in inflammatory bowel disease.

**Professor M. H. Lesso, Department of Medicine, Guy's Hospital Medical School, London:**  
Technical assistance and expenses for one year, to carry out an assessment of intestinal permeability in health and in allergic and other diseases.

**Dr. R. P. H. Thompson, Gastroenterology Laboratory, St. Thomas's Hospital Medical School, London:**  
Research assistance, technical assistance and expenses for three years, for a study of zinc depletion, malnutrition and immune responses in Crohn's disease.

**Dr. D. E. Woolley, Department of Medicine, University of Manchester:**  
Research and technical assistance and expenses for two years, to examine the relationship between gastrointestinal hormones, prostaglandins and tissue proteinases in peptic ulceration, with *Dr. D. F. Martin.*

## General Medicine

### RESEARCH EQUIPMENT

**Professor J. J. K. Best, Faculty of Medicine, University of Edinburgh:**  
Contribution towards the cost of purchasing equipment, to evaluate proton nuclear magnetic resonance imaging.

## Haematology

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor E. R. Huehns, Department of Haematology, School of Medicine, University College London:**

Research assistance and expenses for three years, to study the antenatal diagnosis of thalassaemia from maternal blood.

**Dr. M. A. Mir, Department of Medicine, Welsh National School of Medicine, Cardiff:**

Research assistance and expenses for two years, to study the isolation, purification and characterisation of a sodium efflux inhibitory factor from leukaemic blast cells.

**Professor D. L. Mollin, Department of Haematology, St. Bartholomew's Hospital Medical College, London:**

Extension of research assistance and expenses for two and a half years, for his study of the inter-relationship of vitamin B<sub>6</sub>, riboflavin and glutathione in red cells.

**Professor D. J. Weatherall, Department of Clinical Medicine, University of Oxford:**

Research assistance and expenses for four years, to study iron loading in thalassaemia and related hereditary anaemias.

## Metabolic Disorders

### RESEARCH EQUIPMENT

**Professor R. H. T. Edwards, Department of Physiology, School of Medicine, University College London:**

Contribution towards the cost of equipment, in order to carry out topical nuclear magnetic resonance studies of problems in human metabolism, with *Mr. J. Clifton, Professor E. O. R. Reynolds* and *Professor D. R. Wilkie*.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor Barbara H. Billing, Department of Medicine, Royal Free Hospital School of Medicine, London:**

Research expenses and equipment for two years, for a study of the use of high pressure liquid chromatography in investigations of bilirubin metabolism in liver disease.

**Dr. J. R. Griffiths, Department of Biochemistry, St. George's Hospital Medical School, London:**

Extension of research assistance and expenses for one year, to study the uptake and metabolism of circulating purines and their catabolism.

**Dr. H. Anne Simmonds, Clinical Science Laboratories, Guy's Hospital Medical School, London:**

Technical assistance and expenses for two years, to study the role of purine metabolism in the formation of renal stones.

**Dr. D. H. M. Woollam, Department of Anatomy, University of Cambridge:**

Technical assistance and research expenses for two years, to study the structure, innervation and physiological control of brown fat in the rat and human, and its inter-relationship with white fat.

## Migraine

### RESEARCH EQUIPMENT

**Dr. J. A. L. Amess, Department of Haematology, St. Bartholomew's Hospital Medical College, London:**

Grant for the purchase of additional equipment, for use in the study of the role of blood platelets in the aetiology of migraine, with *Dr. Edda Hanington*.

### GRANT FOR RESEARCH ASSISTANCE

**Dr. Edda Hanington, Department of Haematology, St. Bartholomew's Hospital Medical College, London:**

Extension of research assistance for six months, to study the role of blood platelets in the aetiology of migraine, with *Dr. J. A. L. Amess*.

## Neurology

### RESEARCH EQUIPMENT

**Dr. S. J. Hill, Department of Pharmacy, University of Nottingham:**

Grant to purchase equipment for use in a study of interactions between histamine and monoamines in the central nervous system: (a) modulation of biogenic amine release, and (b) role in circadian rhythm generation, with *Dr. R. Mason*.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor J. B. Cavanagh, Institute of Neurology, London:**

Extension of research and technical assistance and expenses for two years, for ultrastructural studies on the mechanisms of neurotoxicity, with particular reference to acrylamide.

**Dr. J. E. Fox, Department of Physiology, Birmingham University Medical School:**

Research assistance, expenses and equipment for three years, to undertake an assessment of brainstem function: a combined clinical and experimental investigation.

**Professor A. Iggo, Department of Veterinary Physiology, University of Edinburgh:**  
Research assistance, expenses and equipment for two years, to study the noradrenergic innervation of the dorsal horn and its influence on the transmission of noxious and innocuous sensory information to supraspinal levels.

**Professor A. Iggo, Department of Veterinary Physiology, University of Edinburgh:**  
Research and technical assistance, expenses and equipment for three years, for intracellular studies on identified neurones in the superficial dorsal horn to define the organisation of the inputs from the skin and the mechanisms of their interaction at the neurone.

**Professor J. S. Kelly, Department of Pharmacology, St. George's Hospital Medical School, London:**  
Additional research expenses, during his study of neuronal mechanisms involved in the regulation of pain transmission in the spinal cord.

**Professor J. Landon, Department of Chemical Pathology, St. Bartholomew's Hospital Medical College, London:**  
Extension of research assistance and expenses for eight months, to study the endocrine function of the pineal gland.

**Dr. P. D. Lewis, Jerry Lewis Muscle Research Centre, Royal Postgraduate Medical School, London:**  
Extension of research assistance, expenses and equipment for one year, for his study on the effects of inorganic lead on the acquisition and differentiation of cells in the developing brain.

**Dr. P. E. Mullen, Department of Psychiatry, Institute of Psychiatry, London:**  
Extension of research assistance for four and a half months, for an investigation of the possible significance of the pineal gland through circadian and sleep studies.

**Dr. D. G. T. Thomas, Gough Cooper Department of Neurological Surgery, Institute of Neurology, London:**  
Research assistance and expenses for two years, to study the modification of differentiation and proliferation of astrocytes by humoral agents.

## Nutrition

### GRANT FOR RESEARCH ASSISTANCE

**Professor Barbara E. Clayton, Department of Chemical Pathology and Human Metabolism, University of Southampton:**  
Research assistance for six months, to undertake an assessment of nutritional status and nutrient requirements in the elderly.

## Obstetrics and Gynaecology

### GRANT FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. C. W. G. Redman, Nuffield Department of Obstetrics and Gynaecology, University of Oxford:**  
Extension of research assistance and expenses for three months, to study maternal cell-mediated immunity in normal and pre-eclamptic pregnancies, with *Mr. G. M. Sirtat*.

## Orthopaedics

### GRANT FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor R. G. Burwell, Department of Human Morphology, University of Nottingham:**  
Extension of research assistance and expenses for three months, for his study of somatomedins in the metabolic response to trauma.

## Paediatrics

### RESEARCH EQUIPMENT

**Dr. P. G. Sullivan, Department of Child Health, The London Hospital Medical College:**  
Contribution towards the purchase of equipment, for use in his study of the development of a facial appliance to secure a sensor for the routine monitoring of infants with respiratory disorders.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. P. F. Benson, Paediatric Research Unit, Guy's Hospital Medical School, London:**  
Extension of research assistance, technical assistance and expenses for six months, to study enzyme replacement therapy by fibroblast implants, with *Dr. Helen Muir, Mathilda and Terence Kennedy Institute of Rheumatology, London*.

**Professor K. W. Cross, Department of Physiology, The London Hospital Medical College:**  
Research assistance for two years, to investigate the effects of hypoxia on respiratory control and the work of breathing in the human neonate.

**Dr. R. P. A. Rivers, Department of Paediatrics, St. Mary's Hospital Medical School, London:**  
Research assistance and expenses for one year, for a study of contributory causes of neonatal hyperviscosity and the establishment of criteria for treatment of cases at risk, with *Professor J. A. Sirtat*, Department of Biophysics.

## Renal Disorders

### RESEARCH FELLOWSHIP

**Dr. B. D. Ross, Department of Clinical Biochemistry and Clinical Medicine, University of Oxford:**  
Special Fellowship for three years, to study the clinical application, especially in renal disorders, of  $^{31}\text{P}$  nuclear magnetic resonance, under *Professor P. J. Randle* and *Professor D. J. Weatherall*.

## Respiratory Disorders

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. S. T. Holgate, Department of Medicine 1, University of Southampton:**  
Technical assistance and expenses for two years, for a study of pharmacological modulation of airway and inflammatory mediator responses in bronchial asthma, with *Professor A. B. Kay, Department of Clinical Immunology, Cardiothoracic Institute, London*.

**Professor J. B. L. Howell, Department of Medicine, University of Southampton:**  
Research assistance and expenses for two years, to study the interaction between lung resistance and elastance in resistive load detection.

## Surgery

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor L. H. Blumgart, Department of Surgery, Royal Postgraduate Medical School, London:**  
Research expenses for three years, for an experimental investigation of hepatic blood flow control.

**Professor F. Sharp, Department of Obstetrics and Gynaecology, University of Sheffield:**  
Research assistance and expenses for one year, to study the influence of tissue water content and other factors on the efficacy of laser treatment for cervical pre-malignancy.

## Toxicology

### GRANT FOR RESEARCH ASSISTANCE

**Professor R. E. Kendell, Department of Psychiatry, University of Edinburgh:**  
Research and technical assistance for two and a half years, to study the relationship between alcohol consumption by pregnant women and fetal damage: a prospective study in Eastern Scotland.

## Urogenital Disorders

### GRANT FOR RESEARCH ASSISTANCE AND EXPENSES

**Mr. S. L. Stanton, Department of Obstetrics and Gynaecology, St. George's Hospital Medical School, London:**  
Research assistance, expenses and equipment for two years, to study the surgical control of urethral sphincter incompetence in the female.

## Vascular Disorders

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor A. Murray Harper, Wellcome Surgical Institute, University of Glasgow:**  
Extension of research assistance and expenses for one year, for an investigation into the effects of serotonin on cerebral blood flow and metabolism.

**Professor H. Keen, Department of Medicine, Guy's Hospital Medical School, London:**  
Extension of research assistance and expenses for one year, for an investigation into diabetic renal disease.

In addition to the grants listed above, a further 31 grants of less than £2,000 each were awarded for research in various branches of the Clinical Sciences.

## BASIC SCIENCES

### Anatomy

#### UNIVERSITY AWARD

**Dr. K. R. Jessen, Department of Zoology, School of Medicine, University College London:**  
University Award and research expenses for three years, to carry out neurobiological studies of the enteric nervous system, under *Professor G. Burnstock, Department of Anatomy and Embryology*.

#### RESEARCH EQUIPMENT

**Professor C. L. Berry, Department of Morbid Anatomy, The London Hospital Medical College:**  
Contribution towards the cost of a scanning electron microscope, to study the elastic structure of the aortic media.

**Dr. P. D. Byers, Institute of Orthopaedics, London:**

Grant for the purchase of equipment, to carry out histological and morphometric studies of the dynamics of normal bone and metabolic bone disease.

**Professor J. S. G. Miller, Department of Anatomy, University of Newcastle upon Tyne:**

Contribution towards the cost of an electron microscope, for studies in neurobiology and developmental cell biology.

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. P. N. Anderson, Department of Human Morphology, University of Southampton:**

Research assistance and expenses for two years, to study the mechanisms of the uptake and retrograde transport of macromolecules in damaged axons, with *Dr. J. Mitchell*.

**Dr. N. A. H. Dawney, Department of Anatomy, University of Cambridge:**

Research assistance and expenses for one year, for an investigation into the mechanisms of formation of topographic nerve projections.

**Dr. A. R. Lieberman, Department of Anatomy and Embryology, School of Medicine, University College London:**

Research assistance, expenses and equipment for two years, for a study of the development of the hamster visual system.

**Dr. Margaret R. Matthews, Department of Anatomy, University of Oxford:**

Extension of research assistance for six months, to study small granule-containing cells in sympathetic ganglia.

**Dr. T. P. S. Powell, Department of Human Anatomy, University of Oxford:**

Research assistance for six months, for studies of the visual cortex in the monkey.

**Dr. T. P. S. Powell, Department of Human Anatomy, University of Oxford:**

Research assistance for six months, for studies of the lateral geniculate nucleus in the visually deprived monkey.

**Dr. G. Vrhová, Department of Anatomy and Embryology, School of Medicine, University College London:**

Extension of research assistance (part-time) for one year, to study the role of the neurotransmitter in the development of the neuromuscular junction.

**Professor L. Wolpert, Department of Biology as Applied to Medicine, Middlesex Hospital Medical School, London:**

Research assistance and expenses for three years, to study the development of the vascular system in the limb.

**Professor J. Z. Young, Department of Anatomy and Embryology, School of Medicine, University College London:**

Extension of research and technical assistance and expenses, for his studies in neuroanatomy and neurophysiology.

## Biochemistry (General)

### RESEARCH EQUIPMENT

**Dr. E. A. Newsholme, Department of Biochemistry, University of Oxford:**

Grant for the purchase of a scintillation counter, for use in his studies on metabolic control.

### RESEARCH LEAVE FELLOWSHIP

**Dr. G. G. Dodson, Department of Chemistry, University of York:**

Research Leave Fellowship, expenses and equipment for one year, for studies on the structure of insulin and haemoglobin.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor R. H. Burdon, Department of Biochemistry, University of Glasgow:**

Research assistance, expenses and equipment for three years, for an investigation of hyperthermia and the development of thermotolerance in human cells.

**Professor A. T. Diplock, Department of Biochemistry, Guy's Hospital Medical School, London:**

Research assistance, expenses and equipment for three years, for studies on tissue vitamin E measurement by high performance liquid chromatography, and the influence of selenium and unsaturated fatty acids on cellular uptake of  $\alpha$ -tocopherol.

**Dr. B. R. Martin, Department of Biochemistry, University of Cambridge:**

Research assistance and expenses for two years, to study the role of inorganic ions on the action of hormones on isolated liver cells, with *Dr. G. A. Smith*.

**Dr. N. L. Simmons, Department of Physiology and Pharmacology, University of St. Andrews:**

Research expenses and equipment for three years, for a study of the  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Cl}^-$  co-transport system in cultured epithelial cells.

**Dr. J. F. Woodley, Department of Biological Sciences, University of Keele:**

Research assistance and expenses for two years, to study the uptake of liposome-entrapped insulin by rat intestine.

## Enzyme Biochemistry

### RESEARCH TRAINING SCHOLARSHIP

**Mr. S. Singh, Department of Biochemistry, University of Birmingham:**

Research training scholarship for one year, to study cationic activation of lactose synthetase, under *Dr. N. J. Kuhn*.

## GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor H. Baum, Department of Biochemistry, Chelsea College, University of London:**

Research assistance and expenses for three years, for a study of the isolation, properties and functions of hepatic adenosine diphosphatase.

**Dr. B. Burchell, Department of Biochemistry, University of Dundee:**

Research assistance, expenses and equipment for three years, for an investigation of the genetic regulation of hepatic uridine diphosphoglucuronyl-transferase activities using complementary DNA probes.

**Dr. W. F. Cook, Department of Pharmacology, University of Oxford:**

Research assistance, expenses and equipment for three years, to study the location and function of peptidase enzymes in the nervous system.

**Dr. J. Jeffery, Department of Biochemistry, University of Aberdeen:**

Research assistance, expenses and equipment for three years, for a study of structure-function characterisation of liver glucose-6-phosphate dehydrogenase by sequence analysis, with *Dr. H. Järnvall, Karolinska Institute, Stockholm, Sweden.*

## Hormone Biochemistry

### RESEARCH EQUIPMENT

**Dr. J. Mowbray, Department of Biochemistry, School of Medicine, University College London:**

Grant to purchase equipment for use in his investigation of the rapid stimulation of mitochondrial energy production by tri-iodothyronine.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. P. A. Bell, Tenovus Institute for Cancer Research, Welsh National School of Medicine, Cardiff:**

Research assistance, expenses and equipment for two years, for studies on the purification of glucocorticoid receptor proteins and steroid-receptor interactions.

**Dr. H. H. Rees, Department of Biochemistry, University of Liverpool:**

Extension of research assistance and expenses for one year, to study biosynthesis and metabolism of insect moulting hormones, with *Professor T. W. Goodwin.*

**Dr. N. Spencer, Department of Biochemistry, King's College, University of London:**

Research assistance and expenses for two years, to study the interaction of steroid hormones with human bone marrow cells.

**Professor K. W. Taylor, Department of Biochemistry, The London Hospital Medical College:**

Research assistance and expenses for one year, to study cyclic nucleotide metabolism and the synthesis and release of insulin in the islets of Langerhans.

## Lipid Biochemistry

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor J. N. Hawthorne, Department of Biochemistry, University of Nottingham:**

Research assistance and expenses for one year, to study enzymatic pathways of arachidonic acid release from phospholipids in activated platelets.

**Dr. A. D. Smith, Courtauld Institute of Biochemistry, Middlesex Hospital Medical School, London:**

Extension of research assistance and expenses for a further six months, to study the mechanism by which fatty acids inhibit the transformation of lymphocytes to blast cells.

## Protein Biochemistry

### RESEARCH EQUIPMENT

**Dr. B. A. Cooke, Department of Biochemistry, Royal Free Hospital School of Medicine, London:**

Grant for the purchase of a gamma counter, for use in a study of lutropin modulation of Leydig cell plasma membranes.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. Anne Beloff-Chain, Department of Biochemistry, Imperial College of Science and Technology, University of London:**

Research assistance and expenses for two years, to study the action of a pituitary pars-intermedia peptide,  $\beta$ -cell-tropin, from genetically obese mice, on insulin synthesis and release.

**Professor J. R. Clamp, Department of Medicine, University of Bristol:**

Research assistance, technical assistance, expenses and equipment for three years, for a study of the carbohydrate moieties of mucus glycoproteins, with *Dr. J. M. Williams, Department of Chemistry, University College, Swansea.*

**Professor C. N. Hales, Department of Clinical Biochemistry, University of Cambridge:**

Extension of research assistance and expenses for two years, for the development of immunoradiometric assays for cell-specific proteins in human disease, with *Dr. R. J. Thompson.*

**Professor J. Hermon-Taylor, Department of Surgery, St. George's Hospital Medical School, London:**

Extension of research assistance, expenses and equipment for two years, to continue his study of the mechanisms involved in the secretion and membrane insertion of cellular proteins, with *Dr. B. M. Austen.*

**Professor J. D. Judah, Department of Experimental Pathology, School of Medicine, University College London:**

Research assistance and expenses for three years, to study the translocation of newly-synthesised secretory proteins in cell-free systems.

**Dr. J. T. Knowler, Department of Biochemistry, University of Glasgow:**

Research expenses for two years, to investigate the control of enzyme activities in nuclear ribonucleoprotein particles.

**Professor E. Marley, Department of Pharmacology, Institute of Psychiatry, London:**

Research assistance and expenses for two years, to study the absorption, distribution and pharmacological effects of small doses of a dietary amine,  $\beta$ -phenethylamine, given intraduodenally and by other routes.

**Dr. D. N. Wheatley, Department of Pathology, University of Aberdeen:**

Research expenses for two years, to study intracellular pathways of proteolysis in normal and heat-injured mammalian cells.

## Steroid Biochemistry

### GRANT FOR RESEARCH EXPENSES

**Dr. D. A. White, Department of Biochemistry, University Hospital and Medical School, Nottingham:**

Research expenses for three years, to study the role of isoprene-derived molecules in the development of rabbit mammary gland, with *Dr. B. Middleton*.

## Bioengineering

### GRANT FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. B. J. Bellhouse, Department of Engineering Science, University of Oxford:**

Research assistance, expenses and equipment for three years, for a study of the use of the Oxford membrane lung in prolonged respiratory support, with *Professor M. K. Sykes*.

## Biophysics

### RESEARCH LEAVE FELLOWSHIP

**Miss Katy Jennison, Biophysics Research Group, The Open University, Oxford:**

Research Leave Fellowship for one year, for studies on electrical charges on different parts of the muscle contractile apparatus, under *Professor G. F. Elliott*.

## RESEARCH TRAINING SCHOLARSHIP

**Mr. D. J. Lurie, Physics Department, St. Bartholomew's Hospital Medical College, London:**

Research training scholarship for six months, to study the use of time differential perturbed angular correlations in a study of the labelling of intact cells, under *Dr. F. A. Smith*.

## GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor D. Chapman, Department of Biochemistry and Chemistry, Royal Free Hospital School of Medicine, London:**

Extension of research assistance and expenses for eighteen months, to study synthetic biomembrane structures and biomedical applications.

**Dr. W. T. Coakley, Department of Microbiology, University College, Cardiff:**

Research assistance and expenses for two years, for an investigation into the influence of membrane potentials and drugs on tangential stress in membranes.

**Dr. F. W. Flitney, Department of Physiology, University of St. Andrews:**

Technical assistance for two years, to study (a) muscle contractions - light scattering, and (b) cyclic nucleotides.

**Professor J. S. Orr, Department of Medical Physics, Royal Postgraduate Medical School, London:**

Research expenses and equipment for two years, for a study of the basis of contrast mechanisms for nuclear magnetic resonance imaging with protons.

**Dr. C. I. Ragan, Department of Biochemistry, University of Southampton:**

Research assistance and expenses for three years, for electron spin resonance studies of membranes and membrane proteins, with *Dr. A. G. Lee*.

## Cell Biology

### LECTURERSHIP

**Dr. A. P. Johnstone, Department of Immunology, St. George's Hospital Medical School, London:**

Lectureship and technical assistance for three years, for a study of the molecular basis of eukaryotic cell differentiation, under *Dr. L. Hudson*.

### RESEARCH EQUIPMENT

**Professor C. R. Hopkins, Department of Medical Cell Biology, University of Liverpool:**

Contribution towards the cost of an electron microscope, for a study of the use of electron opaque tracers in the study of cellular events.

Dr. G. E. Jones, Department of Biology, Queen Elizabeth College, University of London:

Grant for the purchase of equipment, to study the adhesive interactions of dystrophic cells.

#### RESEARCH TRAINING SCHOLARSHIPS

Mr. P. Levantis, Department of Biochemistry, King's College, University of London:

Research training scholarship for six months, for an investigation of the control of gene expression during erythroid cell differentiation, under Professor H. R. V. Arstein.

Mr. S. J. McRobbie, Department of Biochemistry, University of Oxford:

Research training scholarship for one year, for biochemical and genetic studies of developmental mutations of the cellular slime mould, *Dictyostelium discoideum*, under Dr. P. C. Newell.

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

Professor A. S. Breathnach, Department of Anatomy and Cell Biology, St. Mary's Hospital Medical School, London:

Technical assistance, expenses and equipment for three years, to study the distribution of intra-membranous particles and desmosomes of epidermal cell membranes, with Dr. C. Stoltinski.

Professor N. A. Mitchison, Department of Zoology, School of Medicine, University College London:

Research assistance for six months, for electron microscopic studies of defined neural cells in culture.

### Genetic Engineering

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

Dr. P. T. Emmerson, Department of Biochemistry, University of Newcastle upon Tyne:

Research assistance, expenses and equipment for three years, to study the RNA genome of Newcastle disease virus, using DNA sequencing techniques.

Professor N. McIntyre, Academic Department of Medicine, Royal Free Hospital School of Medicine, London:

Research expenses and equipment for one year, for an attempt to isolate and clone the gene for the human plasma enzyme lecithin: cholesterol acyl-transferase, with Professor R. Williamson, Department of Biochemistry, St. Mary's Hospital Medical School, London.

Professor R. Williamson, Department of Biochemistry, St. Mary's Hospital Medical School, London:

Research assistance and expenses for six months, to undertake the cloning of the gene for the human low density lipoprotein (LDL) cell surface marker, with Dr. S. E. Humphries.

### Immunology

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

Dr. R. J. Hay, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine:

Additional research expenses and equipment for three years, to study the nature of the immune responses of two human mycoses (dermatophytosis and sporotrichosis) in animal models, with Professor D. W. R. Mackenzie.

Dr. M. W. Steward, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine:

Extension of technical assistance and research expenses for three years, to continue his immunological studies of chronic antigen-antibody complex disease in low affinity mice.

### Microbiology

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

Professor L. Brent, Department of Immunology, St. Mary's Hospital Medical School, London:

Research and technical assistance, research expenses and equipment for three years, for a study of the mechanisms of interference by environmental mycobacteria on BCG protection against tuberculosis and leprosy.

Dr. L. O. Butler, Department of Medical Microbiology, St. George's Hospital Medical School, London:

Research assistance and expenses for three years, for studies on the gonococcus relating to the diagnosis of infection, and to the genetics of the high penicillin-resistant non-penicillinase producing *Neisseria gonorrhoeae*.

Dr. C. S. F. Easman, Department of Bacteriology, St. Mary's Hospital Medical School, London:

Research assistance, expenses and equipment for three years, to study anti-microbial agents and phagocytosis.

Professor G. R. F. Hilson, Department of Medical Microbiology, St. George's Hospital Medical School, London:

Technical assistance and expenses for three years, for an investigation of the resistotyping of *Mycobacterium tuberculosis*.

**Dr. W. C. Noble, Department of Bacteriology, St. John's Hospital for Diseases of the Skin, London:**

Extension of research assistance and expenses for a further three months, for his study of the chemical taxonomy of the dermatophytes, with *Dr. D. W. R. Mackenzie*.

**Professor H. Smith, Department of Microbiology, University of Birmingham:**  
Research expenses for two years, to study the determinants of the pathogenicity of trepanemes.

**Dr. S. Tabaqchali, Department of Medical Microbiology, St. Bartholomew's Hospital Medical College, London:**

Research assistance and expenses for two years, to study the role of the outer membrane in the pathogenicity and antigenicity of *Bacteroides fragilis*.

**Professor D. A. Willoughby, Department of Experimental Pathology, St. Bartholomew's Hospital Medical College, London:**

Research and technical assistance, and research expenses, for two years, for a re-investigation of the pathogenesis of tuberculosis, with special reference to immunopathology and BCG vaccination, with *Dr. D. S. Ridley, Pathology Laboratory, Hospital for Tropical Diseases, London*.

**Professor A. J. Zuckerman, Department of Microbiology, London School of Hygiene and Tropical Medicine:**

Extension of research expenses for one year, to study chimpanzee carriers of hepatitis B virus.

### Molecular Biology

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. R. K. Craig, Courtauld Institute of Biochemistry, Middlesex Hospital Medical School, and Professor I. MacIntyre, Endocrine Unit, Royal Postgraduate Medical School, London:**

Research assistance, expenses and equipment, for a joint study of the human calcitonin gene family - regulation, structure and function.

**Dr. R. N. Perham, Department of Biochemistry, University of Cambridge:**

Research expenses and equipment for one year, for a study of the nucleotide sequence of the genes for glycolytic enzymes in *Escherichia coli*.

### Neurobiochemistry

#### UNIVERSITY AWARD

**Dr. P. J. Roberts, Department of Physiology and Pharmacology, University of Southampton:**

Supplementation of stipend for five years, for a study of the role of excitatory amino acids in the mammalian central nervous system, under *Professor K. A. Munday*.

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. M. G. Rumsby, Department of Biology, University of York:**

Research assistance, expenses and equipment for three years, to study myelinogenesis in the central nervous system: an approach using the cuprizone system to induce oligodendrocyte synchronisation.

**Dr. M. Wallis, Biochemistry Laboratory, School of Biological Sciences, University of Sussex:**

Technical assistance, expenses and equipment for two years, to study the biochemistry of prolactin secretion using purified lactotrophs.

### Neuropharmacology

#### GRANT FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor J. H. Wolstencroft, Department of Physiology, University of Birmingham:**

Research assistance, expenses and equipment for three years, to undertake a neurophysiological and pharmacological analysis of brain stem control mechanisms in sleep and the role of transmitters and sleep peptides.

### Neurophysiology

#### RESEARCH LEAVE FELLOWSHIP

**Dr. J. C. Watkins, Department of Physiology, University of Bristol:**

Research Leave Fellowship for one year, to study the characterisation of excitatory amino acid receptors in the mammalian central nervous system and the development of new centrally-acting drugs, under *Professor B. Matthews*.

#### GRANT FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. A. F. Dixon, Wellcome Laboratories of Comparative Physiology, The Zoological Society of London:**

Research assistance and expenses for three years, for neuroanatomical approaches to the study of brain catecholamines, behaviour and pituitary function in male marmosets.

### Parasitology

#### GRANT FOR RESEARCH EXPENSES

**Dr. B. E. Matthews, Department of Zoology, University of Edinburgh:**

Research expenses and equipment for three years, to study the development and eclosion of nematode eggs.

## Pathology

### LECTURERSHIPS

**Dr. J. O. White, Institute of Obstetrics and Gynaecology, London:**  
Lecturership and expenses for three years, to study the oestrogen and progesterin regulation of protein and nucleic acid synthesis in the abnormal uterus of the rat, under *Professor M. G. Elder*, and *Dr. L. Lim, Institute of Neurology, London*.

**Dr. D. Wray, Department of Pathology, School of Dental Surgery, Royal Dental Hospital of London:**  
Lecturership for three years, to investigate the immunoregulation of the mucosal immune system in oral soft tissue disease, under *Professor H. J. J. Blackwood*.

### RESEARCH EQUIPMENT

**Professor V. Dubowitz, Institute of Child Health, Royal Postgraduate Medical School, London:**  
Grant for the purchase of equipment, to study the cell surface of muscle cells in Duchenne muscular dystrophy.

**Professor P. L. Lantos, Department of Neuropathology, Institute of Psychiatry, London:**  
Contribution towards the cost of purchasing a photomicroscope, for an investigation of vascular permeability and cerebral oedema in experimental brain tumours.

**Dr. D. A. Levison, Department of Histopathology, St. Bartholomew's Hospital Medical College, London:**  
Grant for the purchase of equipment, to study the aetiology of Crohn's disease and other inflammatory disorders.

**Dr. K. A. MacLennan, Bland-Sutton Institute of Pathology, Middlesex Hospital Medical School, London:**  
Grant for the purchase of a microprocessor, for use in his study of the pathology of gastrointestinal lymphomas.

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. D. Allan, Department of Experimental Pathology, School of Medicine, University College, London:**  
Research assistance, expenses and equipment for one year, to study the physiological significance of 'free spicules' released from reoxygenated sickle cells.

**Dr. G. Allt, Reta Lila Weston Institute of Neurological Studies, Middlesex Hospital Medical School, London:**  
Research and technical assistance and expenses for two years, for a freeze-fracture study of experimental demyelination and remyelination.

**Dr. D. J. Armstrong, School of Pharmacy, Liverpool Polytechnic:**  
Research expenses and equipment for three years, to study the role of platelets in the postembolic changes in pulmonary sensory receptor activity, with *Dr. J. P. Keenan, Department of Haematology, Royal Liverpool Hospital*.

**Professor V. Dubowitz, Department of Paediatrics and Neonatal Medicine, Royal Postgraduate Medical School, London:**  
Research assistance, expenses and equipment for two years, to investigate the use of lectin cytochemistry for the *in vivo* and *in vitro* study of Duchenne muscular dystrophy.

**Professor R. Duckworth, Department of Oral Medicine, The London Hospital Medical College:**  
Extension of research assistance and expenses for one year, to continue his study of the glycolytic rate of dental plaque as an index of periodontal disease.

**Dr. D. C. Dumonde, Department of Immunology, St. Thomas's Hospital Medical School, London:**  
Extension of research and technical assistance and expenses for six months, to study the characterisation of vascular endothelial cells cultured on microporous membranes.

**Professor R. F. Fisher, Department of Visual Science, Institute of Ophthalmology, London:**  
Research expenses and equipment for one year, for a study of the changes in the chemical and physical properties of the basement membrane in the diabetic state.

**Dr. R. Harrison, Department of Biochemistry, University of Bath:**  
Technical assistance, research expenses and equipment for three years, for a study of the susceptibility of human muscle cells to autoimmune attack on the acetylcholine receptor, with *Dr. G. G. Lum*.

**Professor N. W. Johnson, Department of Oral Pathology, The London Hospital Medical College:**  
Extension of research assistance and expenses for one further year, for his study of the effect of lymphokines and macrophage derived products on the structure and function of the epithelium.

**Dr. C. B. Taylor, Department of Biochemistry, University of Sheffield:**  
Research assistance, equipment and expenses for three years, to study the immunospecific determination of enolase isoenzymes and other markers in normal and pathological tissues, with special reference to the nervous system, with *Dr. W. R. Timperley, Department of Neuropathology, Royal Hallamshire Hospital, Sheffield*.

**Professor R. G. White, Department of Pathology, University of Cambridge:**  
Research assistance for one year, to study (a) the trypanocidal peptides of lymphocytes, and (b) the role of the spleen in handling antigen-antibody complexes.

## Pharmacology

### CAPITAL GRANT FOR BUILDING

**Professor H. P. Rang, Department of Pharmacology, School of Medicine, University College London:**

Contribution towards the cost of laboratory conversions, to facilitate investigations into the mode of action of existing antinociceptive/analgesic agents and of alternative mechanisms through which analgesia may be achieved pharmacologically.

### RESEARCH TRAINING SCHOLARSHIPS

**Mr. S. A. I. Alhasri, Department of Pharmacology, Baghdad University Medical School, Iraq:**

Research training scholarship for one year, to study the urinary excretion of oxytocin, under *Dr. J. M. Walker, Department of Pharmacology, University of Oxford.*

**Mr. P. T. Nhamburo, Department of Pharmacology, King's College, University of London:**

Research training scholarship for one year, to study the action on phospholipases in membranes of the mammalian nervous system and in human platelet membranes, under *Dr. J. M. Littleton.*

### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. Y. S. Bakke, Department of Pharmacology, Royal College of Surgeons, London:**

Extension of research assistance and expenses for four months, to study metabolic and pathological factors affecting the vasoactive hormones in the lung.

**Dr. K. D. Bhoola, Department of Pharmacology, University of Bristol:**

Research assistance and expenses for three years, for studies on renal kallikrein.

**Professor G. Burnstock, Department of Anatomy and Embryology, School of Medicine, University College London:**

Extension of research assistance and expenses for a further two years, for a multi-disciplinary study of purinergic nerves and their possible implication in clinical medicine.

**Dr. A. C. G. Cuello, Department of Human Anatomy, University of Oxford:**

Extension of technical assistance, expenses and equipment for a further two years, to study central nervous system pathways and neurones containing peptides with transmitter-like characteristics.

**Dr. M. Hollingsworth, Department of Pharmacology, Materia Medica and Therapeutics, University of Manchester:**

Research assistance, expenses and equipment for two years, for a study of the pharmacology of lung surfactant secretion.

**Professor D. H. Jenkinson, Department of Pharmacology, School of Medicine, University College London:**

Research assistance, expenses and equipment for three years, for studies on receptor-mediated changes in the ionic permeability of hepatocytes: characterisation using apamin, with *Dr. D. G. Haylett.*

**Dr. E. S. Johnson, Department of Pharmacology, King's College, University of London:**

Research assistance and expenses for three years, for an investigation of pre-synaptic cholinergic antagonism as a possible explanation of the extrapyramidal side-effects of dopamine antagonists used in the treatment of schizophrenia.

**Dr. R. G. Pertwee, Department of Pharmacology, University of Aberdeen:**

Research assistance and expenses for three years, to investigate changes in the functioning of the brain associated with the effects of  $\Delta^9$ -tetrahydrocannabinol ( $\Delta^9$ -THC) on thermoregulation.

**Dr. N. L. Poyser, Department of Pharmacology, University of Edinburgh:**

Extension of research assistance and expenses for two years, to study biochemical processes controlling the supply of arachidonic acid for prostaglandin production by the uterus.

**Dr. P. J. Roberts, Department of Physiology and Pharmacology, University of Southampton:**

Research assistance, expenses and equipment for three years, to study the role of excitatory amino acids as neurotransmitters in the cerebellum.

**Dr. Marthe L. Vogt, ARC Institute of Animal Physiology, Babraham:**

Research assistance and expenses for one year, to study the role of GABA-ergic ( $\gamma$ -aminobutyric acid-releasing) neurones in the pharmacological action of opioids.

**Professor J. H. Wolstencroft, Department of Physiology, University of Birmingham:**

Research expenses and equipment for three years, for a study of pain and peptides: a search for novel peptides in the spinal cord with actions on nociceptive neurones, with *Dr. S. D. Logan.*

**Professor J. H. Wyllie, Department of Surgery, School of Medicine, University College London:**

Research expenses for two years, to study 5-hydroxytryptamine in platelets.

**Dr. M. S. Yates, Department of Pharmacology, University of Leeds:**

Research expenses and equipment for two years, for a study of the effect of renal failure upon the elimination of drugs and dyes by the liver, with *Dr. C. J. Bowmer.*

**Professor M. B. H. Youdim, Department of Pharmacology, Technion, Haifa, Israel:**

Research expenses for three years, to study the central and peripheral regulation of the prolactin receptor in the rat lung - implications for Respiratory Distress syndrome in infants.

#### SYMPOSIUM SUPPORT

Ninth International Congress of Pharmacology; Tokyo, Japan, July 1981.

### Physiology and Reproductive Physiology

#### LECTURERSHIP

**Dr. C. P. Sibley, Department of Child Health, University of Manchester:**

Lecturership for one year, for a study of *in vitro* and *in vivo* placental permeability in the pig and in human subjects, under *Professor R. D. H. Boyd*.

#### RESEARCH EQUIPMENT

**Professor P. F. Baker, Department of Physiology, King's College, University of London:**

Grant for the purchase of equipment, for use in the freeze-fracture analysis of exocytosis and endocytosis.

**Dr. R. R. Ribchester, Department of Physiology, University of Edinburgh:**

Grant for the purchase of equipment, for use in a study of the embryonic development of spinal reflexes.

#### RESEARCH LEAVE FELLOWSHIPS

**Dr. J. C. McGrath, Institute of Physiology, University of Glasgow:**

Research Leave Fellowship for one year, to study the physiological role of the autonomic innervation of the vas deferens.

**Dr. T. Powell, Department of Physics as Applied to Medicine, Middlesex Hospital Medical School, London:**

Research Leave Fellowship for one year, for a study of the intracellular mechanisms of control of cardiac ionic currents using single cells, with *Dr. D. Noble, University Laboratory of Physiology, University of Oxford*.

**Dr. I. P. Trayer, Department of Biochemistry, University of Birmingham:**

Research Leave Fellowship for one year, to study the interaction of myosin with actin and nucleotides.

#### RESEARCH TRAINING SCHOLARSHIPS

**Mr. D. Carroll, School of Engineering and Applied Sciences Group, University of Sussex:**

Research training scholarship for one year, for an investigation into non-invasive detection of the electrical activity of the cardiac conducting system, under *Dr. D. J. Woollons*.

**Mr. A. J. Rankin, Department of Cardiovascular Studies, University of Leeds:**

Research training scholarship for one year, for an investigation into the control of the heart by central chemoreceptors, under *Dr. R. Hainsworth*.

**Mr. P. D. Weinberg, Physiological Flow Studies Unit, Imperial College of Science and Technology, University of London:**

Research training scholarship for one year, to carry out quantitative studies of protein transport in the artery wall using fluorescent tracers, under *Professor C. G. Caro*.

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Professor H. R. V. Arnstein, Department of Biochemistry, King's College, University of London:**

Research assistance and expenses for three years, to study the action of haem in rabbit bone marrow erythroid cell differentiation.

**Professor H. S. Bachelard, Department of Biochemistry, St. Thomas's Hospital Medical School, London:**

Research expenses for two years, for a study of the transport of sugars into organs, with special reference to competitive inhibition, with *Professor P. M. Daniel*.

**Professor P. F. Baker, Department of Physiology, King's College, University of London:**

Research assistance for nine months, to study the pathways of ammonia production by human skeletal muscle.

**Professor T. J. Biscoe, Department of Physiology, School of Medicine, Gabaery College London:**

Technical assistance, expenses and equipment for three years, to study GABA and benzodiazepine receptors in the mutant mouse *spastic*, with *Dr. J. P. Fry*.

**Professor C. Blakemore, University Laboratory of Physiology, University of Oxford:**

Research assistance, expenses and equipment for three years, for a study of spatial vision and binocular interaction in normal and amblyopic humans, with *Dr. A. J. Bron, Nuffield Laboratory of Ophthalmology*.

**Dr. D. L. Bloxam, Institute of Obstetrics and Gynaecology, London:**

Research assistance, expenses and equipment for two years, to study the role of zinc in human fetal growth.

**Dr. K. R. Borkowski, Department of Physiology, University of Leicester:**

Research expenses and equipment for three years, for studies on the characterisation of central 'adrenaline-receptors' in cardiovascular regulation.

**Professor R. D. H. Boyd, Department of Child Health, University of Manchester:**

Research expenses and equipment for two years, to study *in vitro* and *in vivo* placental permeability in the pig, with *Dr. W. M. O. Moore*, Department of Obstetrics and Gynaecology.

**Dr. F. R. Burnet, Biological Laboratory, University of Kent:**

Research assistance, expenses and equipment for two years, to study dissociated hypothalamic cells in primary culture: their identification, manipulation and degree of differentiation.

**Professor D. Chapman, Department of Biochemistry and Chemistry, Royal Free Hospital School of Medicine, London:**

Technical assistance, expenses and equipment for three years, for biophysical studies of rhodopsin and effects due to bleaching in rod outer segments, with *Dr. C. M. Kemp*, Institute of Ophthalmology, London.

**Dr. K. A. Clarke, Department of Physiology, University of Sheffield:**

Research assistance, equipment and expenses for three years, for electrophysiological investigations of the role of 5-HT in the regulation of spinal mechanisms.

**Professor D. F. Cole, Department of Experimental Ophthalmology, Institute of Ophthalmology, London:**

Extension of technical assistance and expenses for one year, to study the role of neuropeptides in the ocular injury response, with *Dr. S. R. Bloom*, Royal Postgraduate Medical School, London.

**Dr. R. S. Comline, Physiological Laboratory, University of Cambridge:**

Research assistance and expenses for one year, for an investigation of the functions of the chorioallantois of the fetal sheep.

**Professor K. W. Cross, Department of Physiology, The London Hospital Medical College:**

Research assistance and expenses for three years, for an analysis of the neuropharmacology of the pain transmission system of the spinal cord, with *Dr. J. Miller*.

**Dr. C. G. Dacke, Department of Physiology, University of Aberdeen:**

Research assistance and expenses for two years, for a study of prostaglandins and avian calcium metabolism.

**Dr. A. F. Dixon, Wellcome Laboratories of Comparative Physiology, The Zoological Society of London:**

Research and technical assistance and expenses for three years, to study neurophysiology, endocrinology and behaviour in the owl monkey.

**Dr. J. A. Firth, Department of Anatomy, St. George's Hospital Medical School, London:**

Technical assistance and expenses for two years, for a cytochemical and ultrastructural investigation of the mechanism and regulation of gastric acid secretion.

**Dr. F. W. Flitney, Department of Physiology and Pharmacology, University of St. Andrews:**

Research assistance, expenses and equipment for three years, to undertake laser optical studies of contracting frog's muscle.

**Professor J. R. Garrett, Department of Oral Pathology, King's College Hospital Medical School, London:**

Research assistance and expenses for three years, to study esteroproteases in salivary glands.

**Dr. A. Gibson, Department of Pharmacology, Chelsea College, University of London:**

Research assistance, expenses and equipment for two years, for an investigation of the role of enkephalins and related peptides in hypothalamic function during stress, with *Dr. S. L. Hart*.

**Dr. B. D. Gomperts, Department of Experimental Pathology School of Medicine, University College London:**

Extension of research assistance for two years, for his study of subcellular localisation of receptor-mediated phosphatidylinositol breakdown in mast cells and neutrophils.

**Professor S. P. F. Hughes, Department of Orthopaedic Surgery, University of Edinburgh:**

Extension of research and technical assistance, expenses and equipment for three years, to study mineral transport in bone.

**Dr. J. J. B. Jack, Department of Physiology, University of Oxford:**

Research assistance and expenses for one year, for studies in cardiac and nerve cell physiology with an on-line computer, with *Dr. D. Noble*.

**Dr. M. T. Jones, Department of Physiology, St. Thomas's Hospital Medical School, London:**

Research assistance and expenses for two years, for an investigation of the hypothalamic receptors involved in the delayed feedback inhibition of CRF secretion.

**Professor R. J. Linden, Department of Cardiovascular Studies, University of Leeds:**

Research assistance for two years, to study the purification of a potential diuretic agent from atrial receptors.

**Dr. E. K. Matthews, Department of Pharmacology, University of Cambridge:**

Research assistance and expenses for three years, to study the membrane dynamics of secretory granule interaction in the pancreatic islet cells: modulation by cytoplasmic protein.

**Dr. S. R. Milligan, Department of Physiology, King's College, University of London:**

Technical assistance and expenses for two years, for studies of uterine physiology in early pregnancy.

**Dr. A. D. Milner, Department of Psychology, University of St. Andrews:**

Research assistance for two years, for a study of interhemispheric transfer of visual information in normal subjects and cases of callosal pathology, with *Dr. M. D. Rugg*.

**Dr. N. N. Osborne, Nuffield Laboratory of Ophthalmology, University of Oxford:**

Extension of research assistance, expenses and equipment for two years, to study amines in the retina, with special reference to serotonin and noradrenaline.

**Mr. J. E. Pascoe, Department of Physiology, School of Medicine, University College London:**

Research assistance and expenses for two years, to study the effect of endogenous opioid on reflex excitability in the spinal cord.

**Professor Sir William Paton, Department of Pharmacology, University of Oxford:**

Research assistance and expenses for three years, for investigations into the formation of bubbles on decompression.

**Professor W. S. Peart, Medical Unit, St. Mary's Hospital Medical School, London:**

Extension of research assistance for six months, to study the regulation of urinary and ileal electrolytes, and water in response to dietary changes of sodium.

**Dr. N. B. Pride, Department of Medicine, Royal Postgraduate Medical School, London:**

Extension of research assistance for three months, to study the role of inspiratory muscles in predisposing to chronic CO<sub>2</sub> retention.

**Dr. B. L. Roberts, Marine Biological Association Laboratory, Plymouth:**

Extension of research assistance and expenses for one year, to study the generation of spinal cord activity during locomotion.

**Dr. N. R. Saunders, Department of Physiology, School of Medicine, University College London:**

Extension of research assistance, expenses and equipment for two years, to investigate proteins in cerebrospinal fluid and brain during fetal development.

**Professor S. J. G. Semple, Department of Medicine, Middlesex Hospital Medical School, London:**

Extension of research assistance for six months, for studies in the chemical control of respiration.

**Dr. J. C. L. Shaw, Department of Paediatrics, School of Medicine, University College London:**

Research assistance and expenses for two years, for studies on the detection of late copper and zinc deficiency in very low birth weight pre-term infants.

**Professor A. M. Sillito, Department of Physiology, University College, Cardiff:**

Technical assistance for three years, for studies of the spatial interactions underlying receptive field properties in the cat visual cortex.

**Dr. Margaret E. Smith, Department of Physiology, Birmingham University Medical School:**

Research assistance, expenses and equipment for three years, for a study of soluble phospholipases and the control of surface membrane properties in normal, atrophic and dystrophic muscles.

**Mr. J. Spencer, Department of Surgery, Royal Postgraduate Medical School, London:**

Research expenses for one year, to study the role of mucosal histamine in gastric secretion.

**Dr. Alison C. Webb, Department of Anatomy, University of Newcastle upon Tyne:**

Research assistance, expenses and equipment for three and a half years, to study the neurophysiology of behaviour arousal and selective attention in the unrestrained cat, with *Professor B. D. Burns*.

**Professor D. L. Yudlevich, Department of Physiology, Queen Elizabeth College, University of London:**

Research assistance and expenses for two years, for a study of the transport of vitamins and amino acids at the maternal and fetal interfaces of the placenta.

**Professor S. Zeki, Department of Anatomy and Embryology, School of Medicine, University College London:**

Research expenses and equipment for three years, for an investigation of the determinants of callosal connectivity in normal and Siamese cats.

#### SYMPOSIUM SUPPORT

29th Meeting of the International Union of Physiological Sciences; Sydney, Australia, August 1983.

#### Virology

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. P. Cash, Department of Bacteriology, University of Aberdeen:**

Research expenses for two years, to study the biological and biochemical characterisation of Clo Mor virus.

**Professor H. Stern, Department of Virology, St. George's Hospital Medical School, London:**

Technical assistance and expenses for one year, for a study of the vertical transmission of hepatitis B infection from mother to newborn infant, and its possible prevention by passive prophylaxis.

**Professor A. J. Zuckerman, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine:**

Technical assistance and research expenses for one year, to undertake a search for persistent viruses in mammalian liver: a study in comparative virology, with *Dr. D. M. Jones*.

A further 137 grants of less than £2,000 were awarded in the field of Basic Sciences in addition to the grants listed above.

## B. SUPPORT OF MEDICAL RESEARCH OVERSEAS

### 1. TROPICAL MEDICINE

#### MAJOR AWARD

This award was shared:

**Dr. D. A. Broadbent, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine:**

Research assistance, expenses and equipment for three years, for an investigation of the mechanisms of the pathogenicity of *Vibrio cholerae*, with subsequent exploitation for vaccine development.

**Dr. J. R. Kusel, Department of Biochemistry, University of Glasgow:**

Research assistance, expenses and equipment for five years, for an investigation into the mobility of, and macromolecules in, the surface membrane of *Schistosoma mansoni* and other parasites, with *Dr. D. I. Stott*, Department of Bacteriology and Immunology, and *Professor P. B. Garland*, Department of Biochemistry, University of Dundee.

#### ADVANCED TRAINING FELLOWSHIPS

**Dr. Hilary A. Flockhart, Department of Medical Helminthology, London School of Hygiene and Tropical Medicine:**

Tropical Fellowship for three years, for an investigation into the enzymic characterisation of nematodes of medical and veterinary importance, under *Professor G. Webbe*.

**Dr. Wendy C. Gibson, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**

Tropical Fellowship for three years, for a study of the biochemical identification of trypanosomes causing human trypanosomiasis in Africa, under *Professor W. Peters*.

**Dr. C. J. Leake, Department of Entomology, London School of Hygiene and Tropical Medicine:**

Tropical Fellowship for two years, for field and laboratory studies on the vector competence of wild and colonised mosquitoes for Japanese encephalitis and related flaviviruses in South-East Asia, under *Professor M. G. R. Varma*.

**Dr. Poh-Chun Tai, Department of Immunology, Royal Postgraduate Medical School, London:**

Tropical Fellowship for three years, for a study of human eosinophil toxicity and membrane biochemistry, under *Dr. C. J. F. Spry*.

## TROPICAL LECTURESHIPS

**Dr. G. B. Lee, MRC Clinical Research Centre, Northwick Park, London:**  
Tropical Lectureship for three and a quarter years, to investigate the intestinal immune mechanisms in tropical sprue and non-specific tropical enteropathy, under *Dr. C. C. Booth*, and to work with *Professor V. I. Mathan, Wellcome Trust Research Unit, Christian Medical College and Hospital, Vellore, India.*

**Dr. S. J. Oppenheimer, Department of Tropical Paediatrics, Liverpool School of Tropical Medicine:**  
Extension of his Tropical Lectureship, technical assistance and research expenses for eighteen months, for a study of anaemia and infection in infancy, with special reference to iron deficiency, in Papua New Guinea, under *Professor R. G. Hendrickse.*

**Dr. J. R. Patel, Division of Communicable Diseases, MRC Clinical Research Centre, Northwick Park, London:**  
Tropical Lectureship, research assistance and expenses for three years, to study the possible role of coronavirus infection in diarrhoeal disease in man in India, under *Dr. D. A. J. Tyrrell*, and to work with *Professor V. I. Mathan, Wellcome Trust Research Unit, Christian Medical College and Hospital, Vellore, India.*

**Dr. J. E. Sanderson, Medical Unit, St. Mary's Hospital Medical School, London:**  
Tropical Lectureship, research expenses and equipment for three years, for an investigation of hypertension and cardiomyopathy in Africa, under *Professor W. S. Peart*, and to work with *Professor M. Mugambi, Clinical Research Centre, University of Nairobi*, based in the Wellcome Trust/Kenya/St. Mary's Research Unit, Nairobi, Kenya.

**Dr. N. J. White, Department of Clinical Medicine, University of Oxford:**  
Extension of his Tropical Lectureship for one year, to undertake clinical investigations into severe falciparum malaria and dengue haemorrhagic fever, with *Dr. D. A. Warrell, Wellcome/Mahidol University/Oxford Tropical Research Unit, Bangkok, Thailand*, under *Professor D. J. Weatherall.*

## CAPITAL GRANT FOR BUILDING

**Professor H. M. Gilles, Liverpool School of Tropical Medicine:**  
Contribution towards the cost of up-grading the Animal House.

## RESEARCH EQUIPMENT

**Dr. Danai Bunnag, Department of Clinical Tropical Medicine, Mahidol University, Bangkok, Thailand:**  
Grant for the purchase of an ambulance for the transport of patients, in connection with his study of the pathophysiology of infectious diseases in South-East Asia, with *Dr. D. A. Warrell.*

**Professor R. G. Hendrickse, Department of Tropical Paediatrics, Liverpool School of Tropical Medicine:**  
Contribution towards the cost of equipment, to carry out an investigation of the effects of mycotoxins on the health of children in the Sudan, with *Dr. M. I. A. Omer* and *Dr. G. I. Suleman, Department of Paediatrics and Child Health, University of Khartoum, Sudan.*

**Professor P. S. Shetty, Department of Physiology and Nutrition, St. John's Medical College, Bangalore, India:**  
Grant for the purchase of equipment, for use in his studies on thermogenesis in low energy intake states.

## GRANTS FOR RESEARCH FELLOWSHIPS AND PERSONAL SUPPORT

### *Associated with Tropical Units*

**Dr. P. D. Ready, Department of Medical Entomology, Liverpool School of Tropical Medicine:**  
Fellowship extension for two further years, to study the ecology and taxonomy of neo-tropical sandflies—*Diptera: Psychodidae*, under *Professor W. W. Macdonald*, and to work with *Dr. R. Lainson, Wellcome Parasitology Unit, Belem, Brazil.*

**Dr. D. P. Turner, Imperial College Field Station, Silwood Park, Berkshire:**  
Fellowship extension and travel expenses for one year, for an investigation of bats as potential reservoirs of leishmaniasis and Chagas' disease, under *Dr. R. Killick-Kendrick*, and to work with *Dr. R. Lainson, Wellcome Parasitology Unit, Belem, Brazil.*

**Dr. K. A. Balasubramanian, Wellcome Research Unit, Christian Medical College and Hospital, Vellore, India:**  
Fellowship and expenses for three months, for studies on a lipid peroxidation inhibitor from intestinal mucosa, under *Professor A. T. Diplock, Department of Biochemistry, Guy's Hospital Medical School, London.*

**Dr. G. Kurian, Wellcome Trust Research Unit, Christian Medical College and Hospital, Vellore, India:**  
Fellowship and expenses for two years, for a study of the immunology of gastric mucosal lymphocytes in pernicious anaemia, atrophic gastritis, and hypogammaglobulinaemia, under *Dr. G. L. Asherson, Division of Immunological Medicine, MRC Clinical Research Centre, Northwick Park, London.*

**Dr. Susy S. Kurian, Wellcome Trust Research Unit, Christian Medical College and Hospital, Vellore, India:**  
Fellowship and expenses for eighteen months, to study the influence of chronic small bowel infection on the histopathology of the neuroendocrine system, under *Dr. Julia M. Polak, Department of Histochemistry, Royal Postgraduate Medical School, London.*

**Dr. D. D. K. Rolston, Christian Medical College Hospital, Vellore, India:**  
Fellowship and expenses for eighteen months, for a study of intestinal secretion in man, under *Dr. A. M. Dawson, Department of Gastroenterology, St. Bartholomew's Hospital Medical College, London.*

**Dr. Raj K. Rolston, Christian Medical College Hospital, Vellore, India:**  
Fellowship and expenses for eighteen months, to study the role of gut hormones in intestinal adaptation to acute and chronic infection, under *Dr. S. R. Bloom, Department of Medicine, Royal Postgraduate Medical School, London.*

**Dr. S. Loareesawan, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand:**  
Fellowship and expenses for one year, for clinical and laboratory studies in haematology, under *Professor D. J. Weatherall, Nuffield Department of Clinical Medicine, University of Oxford.*

**Dr. Sasithon Pukrittayakamee, Department of Radiology, Ramathibodi Hospital, Bangkok, Thailand:**  
Fellowship and travel expenses for two years, to investigate the application of hybridoma techniques to studies of immunodiagnosis pathophysiology and the treatment of snake venom poisoning in South-East Asia, under *Dr. A. J. McMichael, Nuffield Department of Clinical Medicine, University of Oxford, and Dr. D. A. Warrell, Wellcome/Mahidol University/Oxford Tropical Research Unit, Bangkok, Thailand.*

### Others

**Miss Cameile Z. All, Pan American Health Organization, Caribbean Epidemiology Centre, Port of Spain, Trinidad, West Indies:**  
Personal support in the U.K. for three months, to acquire techniques to undertake a study of diarrhoeal disease due to *Campylobacter jejuni* in Trinidad, and a study of mycobacterial infections in Trinidad and Tobago, with *Dr. D. C. J. Bassett.*

**Dr. A. D. M. Bryceson, Clinical Research Centre, University of Nairobi, Kenya:**  
Extension of personal support for one year, to undertake clinical research on leishmaniasis.

**Dr. E. Bursell, Tsetse Research Laboratory, Department of Veterinary Medicine, University of Bristol:**  
Special Fellowship for two and a half years, to study the response of the tsetse fly to host odours, under *Professor F. J. Bourne*, and to work with *Dr. A. M. Jordan.*

**Dr. B. J. Cottrell, Department of Pathology, Bristol University Medical School:**  
Personal support for two separate periods of three months, for an investigation of the nature and role of circulating immune complexes in schistosomiasis, under *Dr. R. B. Taylor.*

**Dr. D. J. Flavell, Department of Medical Helminthology, London School of Hygiene and Tropical Medicine:**  
Fellowship and expenses for a further two years, to study the role of opisthorchiasis in the induction of bile duct carcinoma in an animal model, under *Professor G. Webb.*

**Dr. Hilary A. Flockart, Department of Medicine Protozoology, London School of Hygiene and Tropical Medicine, Winches Farm Field Station, St. Albans:**  
Personal support for three months, to study the enzymic characterisation of nematodes, under *Dr. D. G. Godfrey.*

**Dr. M. T. Gillies, Department of Biological Sciences, University of Sussex:**  
Fellowship and expenses for eighteen months, to carry out a revision of the monograph 'The Anophelineae of Africa South of the Sahara (Ethiopian Zoogeographical Region)', compiled with *Mr. B. de Meillon* in 1968, under *Professor R. J. Andrews.*

**Mr. W. R. Kingston, Wellcome Parasitology Unit, Belem, Brazil:**  
Extension of personal support for six months, in connection with his breeding programme for primates.

**Dr. Carol A. Letch, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**  
Fellowship for three months, for studies on genetic exchange in trypanosomes, under *Dr. D. G. Godfrey.*

**Dr. S. B. Lucas, Geographical Pathology Unit, Department of Histopathology, St. Thomas's Hospital Medical School, London:**  
Fellowship and expenses for one year, for a study of experimental parasitology (immunosuppression in *Schistosoma mansoni* infection) and perinatal mortality in Nairobi, Kenya, under *Professor M. S. R. Hutt.*

**Miss M. G. Ortega Pierres, Division of Immunology, National Institute for Medical Research, London:**  
Fellowship and expenses for one year, to study surface antigens of parasitic nematodes, under *Dr. R. M. E. Parkhouse.*

**Dr. K. D. Rainsford, Department of Pharmacy, University of Zimbabwe, Harare, Zimbabwe:**  
Fellowship and travel expenses for one year, to study the effects of anti-schistosomal and anti-inflammatory drugs on leucotriene and prostaglandin production of leucocytes, especially eosinophils, *in vitro*, under *Professor A. W. Cuthbert, Department of Pharmacology, University of Cambridge.*

**Dr. C. J. Schofield, Department of Entomology, London School of Hygiene and Tropical Medicine:**  
Fellowship and expenses for two and a half years, to study the response of domestic populations of *Triatoma infestans* to treatment with insecticides, under *Professor G. Davidson.*

**Dr. A. Tait, Institute of Animal Genetics, University of Edinburgh:**  
Fellowship extension for one further year, for continued studies on the speciation and genetics of African trypanosomes, under *Professor G. H. Beale*.

#### RESEARCH TRAINING SCHOLARSHIPS

**Miss Gaili Hasan, MRC Biochemical Parasitology Unit, The Molteno Institute, University of Cambridge:**

Research training scholarship for one year, for an analysis of rRNA in trypanosomes and other members of the order *Kinetoplastida*, under *Dr. M. J. Turner*.

**Dr. M. H. Rodriguez-Lopez, Department of Tropical Medicine, University of Yucatan, Mexico:**

Research training scholarship for one year, for a study of specific acquired protective immunity in malaria analysed by hybridoma cell cloning and parasite fractionation techniques, under *Dr. G. A. T. Targett, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine*.

**Mr. D. G. Russell, Imperial College Field Station, Silwood Park, Berkshire:**

Research training scholarship for one year, for studies in cell invasion by *Plasmodium* and other parasites, under *Dr. R. E. Stinden*.

**Dr. D. Wagaine-Twabwe, Department of Applied Physiology and Surgical Sciences, Royal College of Surgeons, London:**

Extension of his research training scholarship for six months, to study blood rheology in sickle cell disease and sickle cell trait, under *Professor D. E. M. Taylor*.

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. J. P. Ackers, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**

Technical assistance and research expenses for six months, for immunological and biochemical studies of invasive and non-invasive zymodemes of *Entamoeba histolytica*.

**Professor C. Arme, Department of Biological Sciences, University of Keele:**

Research assistance, expenses and equipment for three years, for studies on the permeability of larval *Echinococcus granulosus*, with *Dr. R. E. Howells, Department of Parasitology, Liverpool School of Tropical Medicine*.

**Dr. A. Arregui, Department of Neurology, University of Peru, Lima, Peru:**

Research expenses and equipment for three years, for a study of catecholamines and metabolites in brains of animals and the cerebrospinal fluid of humans exposed to hypoxia.

**Professor G. H. Beale, Institute of Animal Genetics, University of Edinburgh:**

Extension of research assistance, expenses and equipment for fifteen months, for continued study of the typing of malarin parasites.

**Professor D. J. Bradley, Department of Tropical Hygiene, Ross Institute of Tropical Hygiene, London School of Hygiene and Tropical Medicine:**

Extension of research and technical assistance and research expenses for a further year, to study the genetics of resistance to infection in mice, in particular to *Leishmania donovani* and also to *Salmonella typhimurium*.

**Dr. R. S. Bray, Department of Zoology, Imperial College Field Station, Silwood Park, Berkshire:**

Research expenses for one year, to search for early tissue forms, and tissue forms causing relapses in rhesus monkeys infected with *Plasmodium cynomolgi bastianellii*.

**Dr. J. R. Brown, Department of Pharmaceutical Chemistry, Sunderland Polytechnic:**

Research assistance, expenses and equipment for two years, for an evaluation of the use of carriers as a means of targeting drugs in trypanosomes, with *Dr. J. B. Mitchell, Department of Biology, and Dr. J. Williamson, Parasitology Division, National Institute for Medical Research, London*.

**Professor P. Chakrabarti, Department of Chemistry, Bose Institute, Calcutta, India:**

Research and travel expenses and equipment for two years, for studies on mycobacteria and mycobacteria-caused diseases, with *Professor D. Chapman, Department of Biophysical Chemistry, Royal Free Hospital School of Medicine, London*.

**Professor H. G. Coore, Department of Biochemistry, University of the West Indies, Kingston, Jamaica:**

Research expenses and equipment for three years, to study the regulation of insulin receptors.

**Dr. G. G. Crane, Department of Haematology, Concord Hospital, Sydney, N.S.W., Australia:**

Research expenses and equipment for one year, to study the immunological and genetic basis of tropical splenomegaly syndrome in Papua New Guinea, with *Dr. H. V. Bashir, Tissue Typing Laboratories, New South Wales Blood Transfusion Service, Sydney*.

**Dr. J. S. Dale, Department of Microbiology, University of Surrey:**

Technical assistance, research expenses and equipment for one year, for a study of DNA from *Mycobacterium leprae*.

**Professor G. Davidson, Department of Entomology, London School of Hygiene and Tropical Medicine:**

Research assistance for two years, for a study of the response of domestic populations to *Triatoma infestans* to treatment with insecticides, by *Dr. C. J. Schofield, Instituto de Neurobiologia, Unidad de Entomologia Medica, Buenos Aires, Argentina*.

**Dr. B. S. Drasar, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine:**

Extension of research and technical assistance, research expenses and equipment for two years, to study the survival and maintenance of virulence of toxigenic enteropathogens, with *Dr R. G. A. Feachem*.

**Dr. D. S. Ellis, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**

Technical assistance and research expenses for two years, for studies on the ultrastructure and development of Congo/Crimean, Lassa and Rift Valley fever virions, using cell culture systems.

**Dr. S. S. Fedail, Department of Medicine, University of Khartoum, Sudan:**

Technical assistance and research expenses for one year, to study pancreatic diseases in the Sudan.

**Dr. H. S. Fraser, Department of Medicine, University of the West Indies, Bridgetown, Barbados:**

Extension of technical assistance, research expenses and equipment for one further year, to study drug metabolism in malnutrition.

**Dr. E. A. Gould, Arbovirus Research Unit, London School of Hygiene and Tropical Medicine, Winches Farm Field Station, St. Albans:**

Technical assistance, research expenses and equipment for two years, to study the use of monospecific and monoclonal antibodies for the identification and characterisation of arboviruses.

**Professor M. S. R. Hutt, Geographical Pathology Unit, Department of Histopathology, St. Thomas's Hospital Medical School, London:**

Research assistance and expenses for six months, for a study of splenomegaly and portal hypertension in Nairobi, Kenya.

**Dr. A. A. Jackson, Tropical Metabolism Research Unit, University of the West Indies, Kingston, Jamaica:**

Extension of research expenses for a further year, for an investigation into nutritional and metabolic problems in malnourished populations.

**Dr. A. A. Jackson, Tropical Metabolism Research Unit, University of the West Indies, Kingston, Jamaica:**

Research expenses for one year, for a study of the metabolism of non-essential nitrogen in man.

**Professor Barrie R. Jones, Department of Preventive Ophthalmology, Institute of Ophthalmology, London:**

Research assistance for six months, to undertake research into onchocerciasis.

**Professor J. R. Lagnado, Department of Biochemistry, University of Zambia, Lusaka, Zambia:**

Extension of research assistance for four months, to study cytoplasmic microtubular systems in trypanosomes as potential targets for chemotherapy in African trypanosomiasis.

**Dr. B. R. Laurence, Department of Entomology, London School of Hygiene and Tropical Medicine:**

Technical assistance and research expenses for two years, for a study of oviposition attractants in mosquitoes.

**Dr. M. J. Lehane, Department of Applied Zoology, University College of North Wales, Bangor:**

Research assistance and expenses for two years, for an investigation into determining the age of an insect.

**Dr. H. S. Micklem, Department of Zoology, University of Edinburgh:**

Research and technical assistance, research expenses and equipment for three years, to analyse the antigens of the human malaria parasite *Plasmodium falciparum*.

**Professor G. S. Nelson, Department of Parasitology, Liverpool School of Tropical Medicine:**

Research assistance, expenses and equipment for three and a quarter years, to study the development of new immunodiagnostic methods for detecting *Echinococcus* infection in man and animals, with special reference to the epidemiology of hydatid disease in Turkana.

**Professor Nancy N. Pearsall, Department of Pathology and Microbiology, University of Zambia, Lusaka, Zambia:**

Research assistance, expenses and equipment for two years, to carry out an immunological assessment of the effect of levamisole on short-course chemotherapy of pulmonary tuberculosis, with *Professor D. A. Mitchison, MRC Unit for Laboratory Studies of Tuberculosis, London*.

**Professor W. Peters, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**

Extension of technical assistance and research expenses for three years, for a study by *Mr. P. G. Sargeant* of the characterisation of *Entamoeba histolytica* and other amoebae infective to man in relation to their pathogenicity.

**Professor W. Peters, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**

Research expenses for one year, for studies on the biochemical characterisation of *Leishmania*.

**Dr. J. S. Porterfield, Sir William Dunn School of Pathology, University of Oxford:**

Extension of research assistance and expenses for two years, to study the immunopathology of haemorrhagic dengue.

**Dr. K. D. Rainsford, Department of Pharmacy, University of Zimbabwe, Harare, Zimbabwe:**

Research expenses and equipment for one year, for a study of the production of leucotrienes and prostaglandins by eosinophils and monocytes derived from patients with schistosomiasis, and the response of these cells to anti-inflammatory drugs *in vitro*.

**Professor G. A. Rose, Department of Medical Statistics and Epidemiology, London School of Hygiene and Tropical Medicine:**

Research assistance and equipment for six weeks, for a preliminary study of hypertension in the West Indies, with *Professor P. S. Sever, St. Mary's Hospital Medical School, London.*

**Dr. M. W. Service, Department of Medical Entomology, Liverpool School of Tropical Medicine:**

Research expenses and equipment for three years, for a study of culicine mosquitoes of the Afrotropical region.

**Professor S. Sirisinha, Department of Microbiology, Mahidol University, Bangkok, Thailand:**

Research expenses and equipment for three years, for immunological studies on experimental opisthorchiasis.

**Dr. C. J. F. Spry, Department of Immunology, Royal Postgraduate Medical School, London:**

Research assistance, expenses and equipment for two years and seven months, to study the comparison of the clinical features and pathogenesis of endomyocardial fibrosis and Löfller's endomyocardial disease.

**Dr. M. W. Steward, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine:**

Technical assistance and research expenses for three years, for a study of the immunochemical analysis and biological significance of immune complexes in onchocerciasis.

**Dr. M. S. Tanner, Department of Child Health, Leicester University School of Medicine:**

Extension of research assistance, technical assistance, and research and travel expenses for eighteen months, for a collaborative study of the role of copper in the aetiology, treatment and prevention of Indian childhood cirrhosis.

**Dr. G. A. T. Targett, Department of Medical Protozoology, London School of Hygiene and Tropical Medicine:**

Technical assistance, research expenses and equipment for one year, for a study of transmission-blocking immunity to *Plasmodium falciparum* malaria.

**Professor R. J. Terry, Department of Applied Biology, Brunel University, Uxbridge:**

Research and technical assistance, research expenses and equipment for three years, to undertake a comparison of variant antigen (VAT) repertoires of recent *Trypanosoma gambiense*-like isolates from West Africa and the effects on the VAT repertoire of transmission through various species of the tsetse fly, with *Dr. K. M. Hudson.*

**Dr. S. J. Terry, Department of Medicine, University of the West Indies, Kingston, Jamaica:**

Technical assistance, research expenses and equipment for two years, to study the inter-relationship between small intestinal morphology, zinc status and immune mechanisms in human stonyloidiasis.

**Professor M. G. R. Varma, Department of Medical Entomology, London School of Hygiene and Tropical Medicine:**

Research and technical assistance, research expenses and equipment for one year, for studies on arbovirus-arthropod host inter-relationships and their role in the ecology of arboviral diseases.

**Professor D. Wakelin, Department of Zoology, University of Nottingham:**

Research assistance, expenses and equipment for three years, to undertake a genetic and immunological analysis of variation of resistance to filarial infections, with *Dr. J. M. Behnke.*

**Dr. D. Walliker, Institute of Animal Genetics, University of Edinburgh:**

Research and technical assistance and research expenses for two years, for genetic studies on antigens of malaria parasites, with *Professor G. H. Beale.*

**Professor D. J. Weatherall, Nuffield Department of Clinical Medicine, University of Oxford:**

Extension of research assistance and expenses for fifteen months, to study the interaction of *Plasmodium falciparum* with human red cells and bone marrow.

**Professor G. Webbe, Department of Medical Helminthology, London School of Hygiene and Tropical Medicine, Winches Farm Field Station, St. Albans:**

Research assistance and expenses for three years, for studies on *Simulium* sp. for colonisation and for infection with *Onchoerca* parasites.

**Professor G. Webbe, Department of Medical Helminthology, London School of Hygiene and Tropical Medicine, Winches Farm Field Station, St. Albans:**

Extension of research assistance for four months, to study the purification and characterisation of a hepatotoxin produced by *Schistosoma mansoni* eggs, with *Dr. M. J. Doenhoff.*

**Professor G. Webbe, Department of Medical Helminthology, London School of Hygiene and Tropical Medicine, Winches Farm Field Station, St. Albans:**

Research assistance and expenses for one year, to undertake immunological studies of experimental *Opisthorchtis viverrini* infection in the hamster host, with *Dr. D. J. Flavell.*

**Dr. C. A. Wright, Department of Zoology, British Museum (Natural History), London:**

Research and travel expenses, to visit the Sudd region of Southern Sudan for one month, to study interspecific interactions between schistosomes in Southern Sudan.

#### GRANT IN AID OF PUBLICATION

**Dr. L. G. Goodwin, Royal Society of Tropical Medicine and Hygiene, London:**  
Grant towards the cost of a report on the present status of tropical medicine in the United Kingdom.

#### SYMPOSIUM SUPPORT

Working Party on 'The Aetiology of Kwashiorkor': London, December 1983.

In addition to the grants listed above, a further 31 grants of less than £2,000 each were awarded in the field of Tropical Medicine during the two-year period under review.

## 2. EUROPEAN PROGRAMME

### Bulgaria

#### RESEARCH FELLOWSHIPS

**Dr. Iskra P. Altunkova, Department of Clinical Immunology, Medical Academy, Varna:**

Fellowship and expenses for fifteen months, for an investigation into genetic restriction of anti-glomerular basement membrane disease at a cellular level using an antigen-stimulated *in vitro* system, under *Professor D. K. Peters, Department of Medicine, Royal Postgraduate Medical School, London.*

**Dr. Nadejda B. Hadzilvanova, Institute of Biophysics, Sofia:**

Fellowship for one year, to study intercellular junctions and their role in direct communication and the spread of excitation between cells of the chordate heart, under *Dr. W. H. Evans, Division of Biochemistry, National Institute for Medical Research, London.*

**Dr. N. V. Naumov, Clinic of Gastroenterology, Sofia:**

Fellowship and expenses for one year, to undertake an analysis of the mechanisms of immune-mediated liver cell damage in hepatitis B virus-associated liver disease, under *Dr. R. Williams, Liver Unit, King's College Hospital Medical School, London.*

**Dr. Tatjana B. Sumerska, Department of Immunology, Institute of Infectious and Parasitic Diseases, Sofia:**

Fellowship for fourteen months, to study the role of antigen-presenting cells in determining the balance between cellular and humoral immunity, under *Dr. Brigid M. Balfour, Division of Immunological Medicine, MRC Clinical Research Centre, Northwick Park, London.*

**Dr. Ekaterina S. Todorova, Institute of Molecular Biology, Sofia:**

Fellowship and expenses for six months, to study the mechanism of novobiocin resistance in staphylococci isolated from clinical specimens, under *Professor J. T. Smith, Department of Microbiology, School of Pharmacy, University of London.*

### Czechoslovakia

#### RESEARCH FELLOWSHIPS

**Dr. P. Goetz, Department of Medical Genetics, Charles University, Prague:**

Fellowship and expenses for nine months, to study normal and aberrant meiosis in the adult human male, using a new method of spermatocyte spreading, under *Dr. Ann C. Chandley, MRC Clinical and Population Cytogenetics Unit, Edinburgh.*

**Dr. V. Janousek, Faculty of General Medicine, Charles University, Prague:**  
Fellowship for four months, to study the effect of environmental lighting on the metabolism of porphyrins and related substances in the Harderian gland, under *Professor I. A. Magnus, Department of Photobiology, Institute of Dermatology, London.*

**Dr. M. Malkovsky, Institute of Molecular Genetics, Czechoslovak Academy of Sciences, Prague:**  
Fellowship for one year, to study isotypes of specific T cell products, under *Dr. G. L. Asherson, Division of Immunological Medicine, MRC Clinical Research Centre, Northwick Park, London.*

**Dr. Drahomira Robozková, Institute of Rheumatology, Prague:**  
Fellowship and expenses for one year, for a study of thiol-disulphide exchange reactions, under *Dr. F. S. Steven, Department of Medical Biochemistry, University of Manchester.*

### East Germany

#### RESEARCH FELLOWSHIPS

**Dr. K. J. Drössler, Karl-Marx-Universität, Leipzig:**  
Fellowship for one year, to study the effect of cytotoxic drugs on the immune response, under *Professor J. L. Turk, Department of Pathology, Royal College of Surgeons, London.*

**Dr. E. G. Krause, Department of Metabolic Regulation, Central Institute for Heart and Circulation Research, Berlin-Schönefeld:**  
Fellowship and expenses for six months, to study the role of phosphorylation in the modification of cardiac contractility during ischaemia and anoxia, under *Dr. P. J. England, Department of Biochemistry, University of Bristol.*

### Finland

#### RESEARCH FELLOWSHIP

**Dr. L. G. M. Klockars, Department of Medicine, University of Helsinki:**  
Fellowship for ten months, to study the characterisation of monocytes, macrophages and activated macrophages, under *Dr. G. A. Currie, Division of Tumour Immunology, Chester Beatty Research Institute, Institute of Cancer Research, Sutton, Surrey.*

### France

#### RESEARCH FELLOWSHIPS

**Dr. J. A. David, Department of Zoology, University of Cambridge:**  
Travelling Research Fellowship to Europe for one year, to study presynaptic receptors in the insect central nervous system, under *Dr. M. Pelhate, Laboratoire de Physiologie, Faculté de Médecine, Angers.*

**Dr. A. Fischer, Institut National de la Santé et de la Recherche Médicale, Paris:**  
Fellowship for one year, to study the role of monocytes in immune suppressor mechanisms in humans and the mouse, under *Dr. M. Feldmann, Imperial Cancer Research Fund Department of Zoology, University College London.*

**Dr. C. Smaña, Department of Hepatobiliary Surgery, Hôpital Paul Brousse, Paris:**  
Fellowship for one year, to study auxiliary and non-auxiliary heterotopic liver transplant in the rat, under *Professor L. H. Blumgart, Department of Surgery, Royal Postgraduate Medical School, London.*

**Dr. Anne I. Taupignon, Laboratoire de Physiologie Animale, Université de Poitiers:**  
Fellowship and expenses for one year, to undertake an analysis of the role of chloride and other ions in the control of ionic currents involved in cardiac rhythm, under *Dr. D. Noble, University Laboratory of Physiology, University of Oxford.*

**Dr. L. Turin, Department of Anatomy, School of Medicine, University College London:**  
Travelling Research Fellowship to Europe and research expenses for eighteen months, for the direct study of intercellular communication in embryos by cytoplasmic dialysis, under *Professor P. Bougis, Station Zoologique de Villefranche, La Darse, Villefranche.*

**Mr. C. R. Weatherley, Department of Orthopaedic Surgery, The London Hospital:**  
Travelling Research Fellowship to Europe for one year, for studies on bone grafting using the electromagnetic coil, under *Dr. J. Duriez, Institut Calot, Berck-Plage.*

**Dr. I. M. Young, Middlesex Hospital Medical School, London:**  
Extension of his Travelling Research Fellowship to Europe for six months, to study pinal hormones in renal disease, under *Professor J. Hamburger, Service de Néphrologie, Hôpital Necker, Paris.*

### Greece

#### RESEARCH FELLOWSHIPS

**Dr. S. Ladas, Professorial Department of Medicine, Evangelismos Hospital, University of Athens:**  
Fellowship and expenses for one year, to undertake an assessment of ileal malabsorption of bile acids in patients with postvagotomy diarrhoea, under *Dr. G. E. Sladen, Gastroenterology Unit, Guy's Hospital Medical School, London.*

**Dr. Efthimia Melissari, Department of Haematology-Lymphoma, Evangelismos Hospital, University of Athens:**

Fellowship and expenses for one year, to undertake an assessment of Factor VIII relating to the anti-coagulant activity of the existing methods for studying the mechanisms of thrombosis, haemostasis and acquired coagulation defects, under *Professor V. V. Kakkar, Department of Surgery, King's College Hospital Medical School, London.*

## Hungary

### WELLCOME-HUNGARIAN FELLOWSHIPS

**Dr. S. Biro, Institute of Biology, University Medical School, Debrecen:**

Fellowship for one year, to study the differentiation of *Streptomyces* strains by means of DNA cloning, under *Dr. D. A. Hopwood, Department of Genetics, John Innes Institute, University of East Anglia.*

**Dr. F. Bojan, Department of Hygiene and Epidemiology, University Medical School, Debrecen:**

Fellowship for one year, for an investigation of the modulators of the carcinogenic process in cell culture, under *Dr. L. G. Lajtha, Paterson Laboratories, Christie Hospital and Holt Radium Institute, Manchester.*

**Dr. J. Egyed, Department of Obstetrics and Gynaecology, Postgraduate Medical School, Budapest:**

Fellowship and expenses for one year, for a study of the clinical and endocrinological patterns of early placental insufficiency, under *Professor J. S. Scott, Department of Obstetrics and Gynaecology, University of Leeds.*

**Dr. M. I. K. Fekete, Institute of Experimental Medicine, Budapest:**

Fellowship and expenses for one year, to study the neurochemical correlates of the adaptation process, under *Dr. T. W. Stone, Department of Physiology, St. George's Hospital Medical School, London.*

**Dr. G. János, Department of Anatomy, University Medical School, Szeged:**

Fellowship for three months, for neuroanatomical studies in the transmission of nociceptive messages, under *Professor P. D. Wall, Department of Anatomy and Embryology, School of Medicine, University College London.*

**Dr. I. Lang, Department of Medicine, Semmelweis University Medical School, Budapest:**

Fellowship extension for three months, to study antibody-dependent and spontaneous cellular cytotoxicity in health and disease, under *Professor I. M. Roitt, Department of Immunology, Middlesex Hospital Medical School, London.*

**Dr. I. Sari, Poultry Department, Veterinary Institute, Debrecen:**

Fellowship for one year, for an investigation into the detection of salmonella antibodies in turkeys, geese and ducks by means of micromethods and complementary bacteriological and pathological studies, under *Mr. J. A. Stevens, Central Veterinary Laboratory, Weybridge.*

**Dr. A. Simonsits, Institute of Genetics, Szeged:**

Fellowship for one year, for a study of chemical DNA synthesis and its use in molecular biology, under *Dr. F. Sanger, MRC Laboratory of Molecular Biology, Cambridge.*

### GRANTS FOR RESEARCH EXPENSES

**Dr. R. A. Dwek, Department of Biochemistry, University of Oxford:**

Extension of subsistence and research expenses of interlaboratory collaboration for a further two years, for an investigation of structure and motility in antibodies, with *Dr. P. Zavodsky, Hungarian Academy of Science, Budapest.*

**Dr. A. D. Smith, Department of Pharmacology, University of Oxford:**

Travel and subsistence expenses for two years, for studies of the specific neuronal connections of the basal ganglia, with Hungarian research workers.

## Iceland

### RESEARCH FELLOWSHIP

**Dr. A. Sigfusson, Department of Neoplastic Disease, National Hospital, Reykjavik:**

Fellowship and expenses for one year, for a study of host defence against herpes zoster in normal and immune compromised hosts, under *Dr. R. L. Souhami, Imperial Cancer Research Fund Human Tumour Immunology Group, School of Medicine, University College London.*

## Italy

### RESEARCH FELLOWSHIPS

**Dr. P. Amunziate, Department of Neurology, University of Siena:**

Fellowship for three months, to study the characterisation of surface constituents in cultures of cerebellar interneurons and astrocytes during development *in vitro*, under *Dr. R. Balazs, MRC Developmental Neurobiology Unit, London.*

**Dr. G. Berton, Istituto di Patologia Generale, Università di Padova, Verona:**

Fellowship and expenses for four months, to study plasma membrane control of the respiratory burst in activated macrophages, under *Dr. S. Gordon, Sir William Dunn School of Pathology, University of Oxford.*

**Dr. L. Camba, Department of Haematology, University of Reggio Calabria:**

Fellowship for six months, for a clinical and experimental study of haemoglobin E/thalassaemia, under *Dr. Bernadette Modell, Department of Obstetrics and Gynaecology, School of Medicine, University College London.*

**Dr. S. Caroldi, Istituto di Medicina del Lavoro, Padova:**  
Fellowship for one year, to study the paradox effects of CS<sub>2</sub> on adrenal dopamine-beta-hydroxylase, under *Dr. L. Magos, MRC Toxicology Unit, Carshalton.*

**Dr. L. Chiovato, Institute of Medical Pathology, Pisa University Medical School:**  
Fellowship for thirteen months, to study thyroid growth-stimulating immunoglobulins (TGI), under *Dr. G. F. Battazzo, Department of Immunology, Middlesex Hospital Medical School, London.*

**Dr. V. Crumelli, Laboratory of Neuropharmacology, 'Mario Negri' Institute, Milan:**  
Fellowship and expenses for two years, to study synaptic and amino acid induced excitation of neurones of the rat lateral geniculate nucleus maintained *in vitro*, under *Professor J. S. Kelly, Pharmacology Department, St. George's Hospital Medical School, London.*

**Dr. Silvia Fontana, CNR 'Centro di Endocrinologia e Oncologia Sperimentale', Naples:**  
Fellowship and expenses for three months, to study lymphocyte-determined membrane antigen, under *Professor P. J. Lachmann, Department of Pathology, University of Cambridge.*

**Dr. Adriana Fortunato, Istituto di Genetica, University of Pavia:**  
Fellowship for one year, for studies in the genetics of cell membrane glycoproteins, under *Professor N. A. Mitchison, Department of Zoology, School of Medicine, University College London.*

**Dr. L. Fusi, Clinic of Obstetrics and Gynaecology, University of Rome:**  
Fellowship extension for one year, to study fetal asphyxia, under *Professor R. W. Beard, Department of Obstetrics and Gynaecology, St. Mary's Hospital Medical School, London.*

**Dr. P. Mondola, Institute of Human Physiology, University of Naples:**  
Fellowship for one year, to identify lipoprotein acceptors for tissue cholesterol, under *Dr. N. B. Myant, MRC Lipid Metabolism Unit, London.*

**Dr. P. Pala, Virologia Oncologica, Ospedale Civile, Sassari, Sardinia:**  
Fellowship and expenses for one year, to study cell-mediated immune responses in virus infection: virus interactions with major histocompatibility antigens, under *Dr. Brigitte A. Askonas, Division of Immunology, National Institute for Medical Research, London.*

**Dr. M. Sargiacomo, Department of Cell Biology, Istituto Superiore di Sanità, Rome:**  
Fellowship for eleven months, to study the mechanisms of toxin action, under *Dr. R. C. Hughes, Division of Biochemistry, National Institute for Medical Research, London.*

## The Netherlands

### RESEARCH FELLOWSHIPS

**Dr. P. Baines, Department of Anatomy and Embryology, School of Medicine, University College London:**  
Travelling Research Fellowship to Europe and research expenses for one year, to study biochemical fractionation of factors in spleen-conditioned medium that stimulate colony-formation by haemopoietic progenitor cells from mouse marrow, under *Professor D. W. Van Bekkum, Radiobiological Institute TNO, Rijswijk.*

**Dr. R. Schats, Academic Hospital of Leiden:**  
Fellowship for six months, to undertake an evaluation of the role of cervical secretions in infertility of unknown aetiology, under *Dr. R. J. Aitken, MRC Reproductive Biology Unit, Edinburgh.*

## Norway

### RESEARCH FELLOWSHIPS

**Dr. Frances M. Cowan, General Practice, London:**  
Travelling Research Fellowship to Europe for six months, to study the effect of common treatment procedures on the cerebral blood flow in the newborn infant, under *Professor L. Walløe, Institute of Physiology, University of Oslo.*

**Dr. R. T. Dean, Department of Applied Biochemistry, Brunel University, Uxbridge:**  
Travelling Research Fellowship to Europe for three months, to study the relationship between membrane flow and the production of thromboplastin by mononuclear phagocytes, under *Professor H. Prydz, Institute for Internal Medicine, University of Oslo.*

## Poland

### RESEARCH FELLOWSHIPS

**Dr. K. M. H. Cedro, Cardiovascular Laboratory, Polish Academy of Sciences, Warsaw:**  
Fellowship for one year, to study the inter-relationship between adenosine nucleotides, adrenergic receptors and prostacyclin in the myocardium, under *Dr. M. I. M. Noble, Medical Research Centre, Midhurst.*

**Dr. Dorota M. Gorecka, Institute of Tuberculosis, Warsaw:**  
Fellowship and expenses for one year, for a study of radiological measurements in the prediction of pulmonary arterial pressure in chronic respiratory disease, under *Professor J. M. Bishop, Department of Medicine, University of Birmingham.*

**Dr. A. J. Hermanowicz**, Department of Gastroenterology, Silesian School of Medicine, Katowice:

Fellowship and expenses for one year, to study the chemotaxis of mononuclear cells in ulcerative colitis and Crohn's disease, under *Dr. D. P. Jewell*, Gastroenterology Unit, Radcliffe Infirmary, University of Oxford.

**Dr. Jolanta M. Jdrzejczyk**, Department of Histology and Embryology, Medical Academy, Warsaw:

Fellowship and expenses for one year, for a study of the quantitation of cholinesterase molecules *in situ*, in normal and dystrophic chicken muscles, under *Professor E. A. Barnard*, Department of Biochemistry, Imperial College of Science and Technology, University of London.

**Dr. R. S. Mazuryk**, Department of Pathology, Pomeranian Medical Academy, University of Szczecin:

Fellowship and expenses for one year, to study the pathology of the motorial organs system, under *Professor D. L. Gardner*, Department of Pathology, University of Manchester.

**Dr. W. J. P. Olszynski**, Department of Internal Medicine, Institute of Haematology, Warsaw:

Fellowship and expenses for one year, for a study of monoclonal antibodies against clotting factors, under *Dr. E. G. D. Tuddenham*, Department of Haematology, Royal Free Hospital School of Medicine, London.

**Dr. Jolanta Opacka**, Department of Biochemistry, Institute of Occupational Medicine, Lodz:

Fellowship and expenses for one year, to study changes in the central nervous system produced by chemicals, under *Dr. W. N. Aldridge*, MRC Toxicology Unit, Carshalton.

**Dr. J. M. Rowinski**, Department of Histology and Embryology, Medical Academy, Warsaw:

Fellowship for one year, to study fibre types and enzyme changes in dystrophic chicken muscles, under *Professor E. A. Barnard*, Department of Biochemistry, Imperial College of Science and Technology, University of London.

**Dr. T. A. Sylwestrowicz**, Institute of Haematology, Warsaw:

Fellowship extension for four months, to continue his biochemical studies of the blast cells in acute leukaemia, under *Professor A. V. Hoffbrand*, Department of Haematology, Royal Free Hospital School of Medicine, London.

**Dr. Anna Szokulska**, Department of Biosynthesis of Proteins, Institute of Biochemistry and Biophysics, Polish Academy of Sciences, Warsaw:

Fellowship and expenses for one year, to study the effects of polyprenols on cells, under *Dr. R. C. Hughes*, Division of Biochemistry, National Institute for Medical Research, London.

**Professor M. A. Zembala**, Institute of Paediatrics, University of Krakow:

Fellowship and expenses for sixteen months, to study the role of T auxiliary cells in the inhibition of contact sensitivity by specific T suppressor factor, under *Dr. G. L. Asherson*, Division of Immunological Medicine, MRC Clinical Research Centre, Northwick Park, London.

#### GRANT FOR RESEARCH EXPENSES

**Dr. W. Karczewski**, Medical Research Centre, Polish Academy of Sciences, Warsaw:

Research expenses and equipment for two years, to develop Anglo-Polish co-operation in medical research.

#### Portugal

##### RESEARCH FELLOWSHIP

**Dr. J. E. T. de E. Guimaraes**, Department of Haematology, S. Joao Hospital, Porto:

Fellowship and expenses for one year, for a study of differentiation and maturation in acute myeloid leukaemia, under *Professor A. V. Hoffbrand*, Department of Haematology, Royal Free Hospital School of Medicine, London.

#### Romania

##### GRANT FOR RESEARCH EXPENSES

**Dr. G. Benga**, Department of Cell Biology, Faculty of Medicine, Cluj:

Research expenses and equipment for three years, for studies in membrane protein/lipid interactions, with *Professor H. Baum*, Department of Biochemistry, Chelsea College, University of London.

#### Spain

##### RESEARCH FELLOWSHIPS

**Professor M. Cortijo**, Department of Physical Chemistry, University of Granada:

Fellowship for one year, to study protein rotation in biological membranes, under *Professor D. Chapman*, Department of Biochemistry and Chemistry, Royal Free Hospital School of Medicine, London.

**Dr. A. Garrido**, Department of Biochemistry, University of Córdoba:

Fellowship for fifteen months, to study histocompatibility antigens by means of radioimmunoassay, under *Professor H. Festsenstein*, Department of Immunology, The London Hospital Medical College.

**Dr. F. M. Goni, Department of Biochemistry, University of the Basque Country, Bilbao:**

Fellowship and research expenses for one year, to study hormone-receptor movement in plasma biomembranes, under *Professor D. Chapman, Department of Biochemistry and Chemistry, Royal Free Hospital School of Medicine, London.*

**Dr. M. Santamaria-Ossorio, Department of Physiology and Biochemistry, University of Córdoba:**

Fellowship and expenses for one year, to study the relationship of neonatal macrophages to the induction of the immune response, under *Professor H. Festsenstein, Department of Immunology, The London Hospital Medical College.*

### Sweden

#### RESEARCH FELLOWSHIP

**Dr. M. S. Grundy, Department of Parasitology, National Bacteriological Laboratory, Stockholm:**

Wellcome-Swedish Travelling Research Fellowship for six months, to study the purification and characterisation of diagnostic antigens from *E. histolytica*, under *Dr. G. Huldt.*

#### GRANT FOR RESEARCH EXPENSES

**Dr. T. Svenberg, Department of Surgery, Karolinska Institute, Stockholm:**

Research expenses during his Wellcome-Swedish Travelling Research Fellowship, to study the role of motilin in (1) the control of duodenal motility and bile flow, (2) the pathogenesis and treatment of post-operative ileus, and (3) alimentary motility in the malignant carcinoid syndrome, under *Professor R. B. Weibour, Department of Surgery, Royal Postgraduate Medical School, London.*

### Switzerland

#### RESEARCH FELLOWSHIP

**Dr. M. P. A. Young, Department of Clinical Endocrinology, St. George's Hospital, London:**

Travelling Research Fellowship to Europe for one year, for an investigation into metabolic activities in the isolated perfused human placental cotyledon, under *Dr. H. Schneider, Department of Perinatal Physiology, Zürich University Hospital.*

### U.S.S.R.

#### RESEARCH FELLOWSHIP

**Dr. A. A. Selyanko, Department of Autonomic Nervous System Physiology, Bogomoletz Institute of Physiology, Kiev:**

Fellowship and expenses for one year, for a study of slow synaptic excitation in mammalian neurones, under *Professor D. A. Brown, Department of Pharmacology, School of Pharmacy, University of London.*

### West Germany

#### RESEARCH FELLOWSHIP

**Dr. K. O. Hiller, Department of Radiation Chemistry, Hahn-Meitner-Institut, Berlin:**

Fellowship for fourteen months, to study the interactions of potential anti-inflammatory drugs with oxygen-free radicals and their role in tissue injury, under *Dr. R. L. Wilson, Department of Biochemistry, Brunel University, Uxbridge.*

### Yugoslavia

#### RESEARCH FELLOWSHIP

**Dr. B. Zloković, Institute of Medical Physiology, University of Belgrade:**

Fellowship and expenses for three months, to study brain uptake of two dipeptides, under *Dr. H. Davson, Department of Physiology, King's College, University of London.*

A further twenty grants, not exceeding £2,000 each, were awarded during the period under review, in addition to those listed above.

### 3. OTHER OVERSEAS AWARDS

#### Argentina

##### RESEARCH FELLOWSHIP

**Dr. A. M. Bronstein, Bancaria Policlinic, Buenos Aires:**

Fellowship and expenses for six months, to study the motor abnormalities of eye and head movement in Parkinson's disease and the effect of treatment, under *Dr. C. Kennard, Department of Neurology, The London Hospital.*

#### Australia

##### RESEARCH FELLOWSHIPS

**Dr. S. T. F. Chan, Monash University, Melbourne:**

Fellowship extension for six months, for an investigation of factors determining volume and concentration of urine, and thus plasma osmolality and serum sodium concentration after injury, under *Professor H. A. F. Dudley, Academic Surgical Unit, St. Mary's Hospital Medical School, London.*

**Dr. V. M. Duncombe, University of New South Wales, Sydney:**

Fellowship extension for three months, to study the intestinal control of calcium absorption in man using a newly-developed *in vitro* technique, under *Dr. T. J. Peters, Division of Clinical Cell Biology, MRC Clinical Research Centre, Northwick Park, London.*

**Dr D. Stiel, Royal North Shore Hospital, Sydney:**

Fellowship for fifteen months, to study the biochemical basis of duodenal ulceration, under *Dr. T. J. Peters, Division of Clinical Cell Biology, MRC Clinical Research Centre, Northwick Park, London.*

#### Brazil

##### RESEARCH FELLOWSHIPS

**Dr. F. Betti, University of São Paulo:**

Fellowship and expenses for three months, for studies on the proteolytic activity of developing ameloblasts and enamel by the substrate-film technique, under *Dr. E. Katchurian, Department of Anatomy and Histology, The London Hospital Medical College.*

**Dr. Rachel Lewinsohn, University of Rio de Janeiro:**

Fellowship and research expenses for fifteen months, to study benzylamine oxidases in health and disease, under *Dr. B. A. Callingham, Department of Pharmacology, University of Cambridge.*

#### China

##### RESEARCH FELLOWSHIP

**Dr. R.-C. Bi, Institute of Biophysics, Academia Sinica, Peking:**

Fellowship and expenses for one year, for a study of the crystal structure of despentapeptide insulin, under *Dr. G. G. Dodson, Department of Chemistry, University of York.*

##### RESEARCH TRAINING SCHOLARSHIP

**Dr. Cai Wen Qin, Shanghai Hospital:**

Research training scholarship for nine months, for studies on the innervation of the gall bladder and biliary pathways, under *Professor G. Burnstock, Department of Anatomy and Embryology, School of Medicine, University College London.*

#### Hong Kong

##### RESEARCH FELLOWSHIP

**Dr. S.-K. A. Law, Hong Kong:**

Fellowship for one year, to study the molecular properties of C3 and related proteins, under *Professor R. R. Porter, Department of Biochemistry, University of Oxford.*

#### India

##### RESEARCH FELLOWSHIPS

**Dr. N. Z. Baquer, School of Life Sciences, Jawaharal Nehru University, New Delhi:**

Fellowship and expenses for six months, for a study of membrane-bound enzymes in the ageing brain, under *Professor A. L. Greenbaum, Department of Biochemistry, School of Medicine, University College London.*

**Dr. V. E. Bhargava, Department of Pharmacology, Himachal Pradesh Medical College, Simla:**

Fellowship extension for three months, to study the central cardiovascular effects of morphine and opioid peptides and the evidence for their release, under *Professor W. Feldberg, National Institute of Medical Research, London.*

**Dr. A. K. Dubey, Department of Anatomy, All India Institute of Medical Sciences, New Delhi:**

Fellowship extension for four months, to study the neuroendocrine effects of prolactin and luteinising hormone releasing factor analogues, under *Dr. J. Herbert, Department of Anatomy, University of Cambridge.*

**Miss Mary A. Joseph, Department of Anatomy, St. John's Medical College, Bangalore:**

Fellowship for one year, to undertake a cytogenetic analysis of the meiotic chromosomes in human male spermatozoa, under *Dr. Ann C. Chandley, MRC Clinical and Population Cytogenetics Unit, Edinburgh.*

**Dr. R. Raghuraj, Central Drug Research Institute, Lucknow:**

Fellowship for nine months, to study the pharmacology of the reticulospinal antinociceptive pathway, under *Dr. M. H. T. Roberts, Department of Physiology, University College, Cardiff.*

**Dr. A. Singhi, Department of Zoology, University of Jodhpur:**

Fellowship extension for six months, to study the nutritional (carbohydrate) relationships between laboratory rats and *Maulliformis dubius*, under *Dr. D. W. T. Crompton, The Malteno Institute, University of Cambridge.*

**Dr. M. S. Shaila Subba Rao, Genetic Engineering Group, Microbiology and Cell Biology Laboratory, Indian Institute of Science, Bangalore:**

Fellowship and expenses for six months, to study the cloning of morbilliviruses, under *Dr. W. C. Russell, Virology Division, National Institute for Medical Research, London.*

**Professor Molly Thomas, Department of Clinical Pharmacology, Christian Medical College and Hospital, Vellore:**

Fellowship for three months, to investigate the methodology of studies on drug disposition in man, under *Professor P. Turner, Department of Clinical Pharmacology, St. Bartholomew's Hospital Medical College, London.*

**Dr. Anita Tripathi, University of Delhi:**

Fellowship for one year, for studies in respiratory physiology, under *Dr. J. M. B. Hughes, Department of Radiology, Royal Postgraduate Medical School, London.*

## Iran

### RESEARCH FELLOWSHIP

**Dr. T. Fakouhi, Department of Pharmacology, University of Shiraz:**

Special Fellowship and expenses for one year, to study the neurochemical mechanisms in tardive dyskinesia, under *Professor G. V. R. Barn, Department of Pharmacology, King's College, University of London.*

## Israel

### RESEARCH FELLOWSHIPS

**Dr. I. Bah, Division of Oral Pathology, Hadassah School of Dental Medicine, Hebrew University of Jerusalem:**

Fellowship and expenses for one year, for a study of the differentiation of osteogenic tissue from marrow fibroblasts and its application to human bone diseases, under *Dr. Maureen E. Owen, MRC Bone Research Laboratory, Oxford.*

**Dr. R. R. Ben-Harari, Department of Pharmacology, Institute of Basic Medical Sciences, Royal College of Surgeons, London:**

Fellowship extension for six months, to study sex steroid receptors in lung, under *Professor M. B. H. Youdim, Department of Pharmacology, Faculty of Medicine, Technion, Haifa.*

**Dr. M. Hanani, Laboratory of Experimental Surgery, Hadassah University Hospital, Jerusalem:**

Fellowship and expenses for three months, for a tissue culture study of the enteric nervous system, under *Professor G. Burnstock, Department of Anatomy and Embryology, School of Medicine, University College London.*

**Dr. U. Kutz, Department of Biochemistry, Weizmann Institute, Rehovot:**

Fellowship for one year, to study the properties of the active transport system of urea in toad skin, under *Professor R. D. Keynes, Physiological Laboratory, University of Cambridge.*

## Japan

### WELLCOME-JAPANESE FELLOWSHIPS

**Dr. Y. Abe, Department of Pathology, Teikyo University School of Medicine, Tokyo:**

Fellowship and expenses for one year, for an investigation of the origins of IgG-Fc receptor-bearing thymus-derived lymphoblasts in cultures stimulated by streptococcal mitogens, under *Professor R. R. A. Coombs, Immunology Division, Department of Pathology, University of Cambridge.*

**Dr. M. Kanazawa, Department of Medicine, Keio University:**

Fellowship extension for six months, to study non-invasive measurement of lung water using the multiple indicator-dilution method, under *Dr. G. de J. Lee, Cardiac Department, John Radcliffe Hospital, University of Oxford.*

**Dr. R. Makidono, Faculty of Medicine, Kyushu University, Fukuoka:**  
Fellowship and expenses for six months, to study single cell assays of T cell function using antifactor antisera, under *Professor N. A. Mitchison, Department of Zoology, School of Medicine, University College London.*

**Professor S. Suzuki, Department of Paediatrics, Gunma University:**

Fellowship extension for one year, to study the effect of immunoregulatory humoral factors on the maturation of immunocompetent cells, under *Professor R. R. A. Coombs, Immunology Division, Department of Pathology, University of Cambridge.*

**Dr. T. Yamaguchi, Department of Cardiovascular Surgery, Tokyo Women's Medical College, Ogu:**

Fellowship and research expenses for eighteen months, to study measurement and analysis of turbulent blood flow in the cardiovascular system, under *Professor C. G. Caro, Physiological Flow Studies Unit, Imperial College of Science and Technology, University of London.*

## Turkey

### RESEARCH FELLOWSHIPS

**Dr. V. Gul, Department of Pathology, University of Bursa:**

Fellowship and expenses for seven months, for an investigation of immunoglobulin expression by rheumatoid and normal B lymphocytes activated by Epstein-Barr virus, under *Professor E. J. Holborow, Bone and Joint Research Unit, The London Hospital Medical College.*

**Dr. A. Kayan, Department of Neurology, Aegean University Medical Faculty, Izmir:**

Fellowship for one year, to study (1) vestibular evoked responses as an aid to neuro-otological diagnosis, and (2) fast phase velocity of caloric, rotational and optokinetic nystagmus in clinical vestibular work, under *Dr. J. D. Hood, MRC Hearing and Balance Unit, London.*

**Professor K. Önen, Department of Medicine, University of Istanbul:**

Fellowship for one year, to study sodium transport by blood cells in hypertension, under *Dr. N. F. Jones, Department of Medicine, St. Thomas's Hospital Medical School, London.*

## U.S.A.

### RESEARCH FELLOWSHIPS

**Dr. R. L. Barnhill, Department of Dermatology, University of Texas Southwestern Medical School, Dallas, Texas:**

Fellowship and expenses for one year, for a study of epithelial influences on angiogenesis, under *Dr. T. J. Ryan, Department of Dermatology, The Slade Hospital, University of Oxford.*

**Dr. D. G. Hanson, Department of Immunology, National Asthma Center, Denver, Colorado:**

Fellowship and expenses for six months, to study the immunologic significance of digestion of a protein antigen in man, with regard to immunogenic and tolerogenic protein fractions in serum, under *Dr. Anne Ferguson, Department of Medicine, University of Edinburgh.*

**Dr. A. G. Letch, Department of Respiratory Medicine, City Hospital, University of Edinburgh:**

Fellowship for six months, to study the role of Type 1 mediators in obstructive pulmonary disease, under *Dr. K. F. Austen, Department of Medicine, Harvard Medical School, Boston, Massachusetts.*

**Professor A. Malley, Oregon Regional Primate Center, Oregon:**

Fellowship and expenses for six months, to study the influence of cyclosporin A on T cell regulation of the IgE response, under *Dr. G. G. B. Klaus, Division of Immunology, National Institute for Medical Research, London.*

**Dr. T. W. Rademacher, Department of Biochemistry, University of Wisconsin, Madison, Wisconsin:**

Fellowship and expenses for six months, for studies on immunoglobulins as glycoproteins, under *Dr. R. A. Dwek, Department of Biochemistry, University of Oxford.*

**Dr. G. J. Taggart, Yale University School of Medicine, New Haven, Connecticut:**

Fellowship extension for six months, to study renal excretion of bile acids and bilirubin in cholestasis, under *Professor Barbara H. Billing, Department of Medicine, Royal Free Hospital School of Medicine, London.*

Several other grants of less than £2,000 each were awarded in the category of Other Overseas Awards in addition to those listed above.

## C. VETERINARY AND COMPARATIVE MEDICINE

### MAJOR AWARD

**Professor F. J. Bourne**, Department of Veterinary Medicine, University of Bristol: Research and technical assistance, and expenses, for three years, for a study of mucosal protection against viral infection of the respiratory tract.

### UNIVERSITY AWARD

**Dr. D. H. Lloyd**, Royal Veterinary College, London: Extension of his University Award, and technical assistance and expenses, for a final six months, for a study of canine chronic pyoderma.

### RESEARCH EQUIPMENT

**Professor R. J. Fitzpatrick**, Department of Veterinary Clinical Studies, University of Liverpool: Grant towards the cost of equipment, for use in his study of the variation in the fundamental structure of the uterine cervix at parturition.

**Dr. P. H. Holmes**, Department of Veterinary Physiology, University of Glasgow: Grant towards the cost of equipment, for use in his study of the pathophysiology of parasitic infections.

**Dr. I. M. Smith**, Department of Microbiology and Parasitology, Royal Veterinary College, London: Grant towards the purchase of equipment, for studies of the pathogenesis of certain viral and bacterial diseases of farm animals.

**Dr. D. H. Snow**, Department of Veterinary Pharmacology, University of Glasgow: Grant for the purchase of equipment, for use in his study of the factors which affect the composition of muscle fibres.

### RESEARCH FELLOWSHIPS

**Dr. R. J. Evans**, Department of Clinical Veterinary Medicine, University of Cambridge: Fellowship for three years, including research expenses and equipment, to study the development of tissue and organ culture techniques for the investigation of cell toxicity and cell-cell interaction in the nervous system, under *Dr. W. F. Blakemore*.

**Professor F. I. B. Kayanja**, Faculty of Veterinary Medicine, Makerere University, Kampala, Uganda: Fellowship and expenses for one year, for an investigation into the comparative ultrastructure of the avian heart, under *Dr. A. R. Akester*, Department of Veterinary Anatomy, University of Cambridge.

**Mr. D. N. Kisauzi**, Department of Physiology, Faculty of Veterinary Medicine, Makerere University, Kampala, Uganda: Fellowship and expenses for one year, to study the hepatic and extra-hepatic turnovers of lipids and gluconeogenic precursors in sheep, under *Professor B. F. Leek*, Department of Veterinary Physiology and Biochemistry, University College, Dublin, Eire.

**Mr. L. Macartney**, Department of Veterinary Pathology, University of Glasgow: Fellowship for three years, for studies on canine infectious enteritis, under *Dr. I. A. P. McAndlish*.

### RESEARCH TRAINING SCHOLARSHIPS

**Miss H. C. Brown**, Department of Veterinary Physiology, University of Glasgow: Research training scholarship for three years, to study the pathogenesis of acute protozoal infections, with particular reference to African trypanosomiasis, under *Dr. P. H. Holmes*.

**Mr. T. F. Byrne**, Department of Microbiology, University of Reading: Research training scholarship for three years, for a study of the influence of age, diet and bacterial flora on the response of pigs to specific enteropathogens, under *Professor C. Kaplan*.

**Mr. S. D. Carrington**, Department of Veterinary Anatomy, University of Liverpool: Research training scholarship for three years, for an ultrastructural investigation of the general morphology and innervation of the feline cornea, under *Professor A. S. King*.

**Mr. P. J. Cripps**, Department of Veterinary Medicine, University of Bristol: Research training scholarship for three years, for an investigation of the epidemiology of coliform mastitis in the dairy cow, under *Professor F. J. Bourne* and *Dr. C. R. Stokes*.

**Mr. P. J. Goddard**, Department of Surgery and Obstetrics, Royal Veterinary College, London: Research training scholarship for three years, to undertake a comparative study of the function of the uterine (Fallopian) tubes in domestic animals, with particular reference to the influence of exogenous hormones, under *Professor D. E. Noakes*.

**Mr. N. M. Honhold**, Department of Physiology, Royal Veterinary College, London: Research training scholarship for three years, for a study of inhibition by innocuous peripheral stimuli of the nociceptive responses of spinal cord neurones, and the neurotransmitters involved, under *Professor M. G. M. Jukes*.

**Miss Judith M. Hunt**, Department of Surgery and Obstetrics, Royal Veterinary College, London: Research training scholarship for three years, to study the pathophysiology of post-operative paralytic ileus, under *Dr. E. L. Gerring*.

**Mr. J. Lida, Department of Pathology, University of Cambridge:**  
Research training scholarship for three years, for studies on lymphoid cell functions in relation to persistent viral infection in sheep, under *Professor P. J. Lachmann*.

**Miss Eleanor M. Riley, Department of Veterinary Pathology, University of Liverpool:**  
Research training scholarship for three years, to study structural and immunocytochemical changes in lymphoid tissue during early infection with *Echinococcus spp.*, under *Professor D. F. Kelly*.

**Mrs. Margaret E. Stoddart, Department of Veterinary Medicine, University of Bristol:**  
Research training scholarship for three years, to study the pathogenesis and epidemiology of feline infectious peritonitis, under *Professor F. J. Bourne*.

**Mrs. J. C. Turner, Department of Anatomy, University of Bristol:**  
Research training scholarship for three years, for a study of stress-related bone remodelling in cancellous bone, under *Dr. A. E. Goodship*.

**Mr. D. A. Williams, Department of Veterinary Pathology, University of Liverpool:**  
Research training scholarship for three years, for an investigation of naturally-occurring exocrine pancreatic insufficiency in the dog, under *Professor D. F. Kelly*.

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. B. A. Alsopp, Veterinary Research Department, Kenya Agricultural Research Institute, Muguga, Kenya:**  
Technical assistance and research expenses for one year, to undertake an evaluation of isoenzyme analytical methods for the characterisation of populations of *Duttonella trypanosomes*.

**Professor K. P. Baker, Department of Veterinary Preventive Medicine and Food Hygiene, University College, Dublin, Eire:**  
Extension of research assistance, expenses and equipment for one year, for an investigation of allergic reactions in horse skin to biting insects: characterisation of the allergens and antibodies involved in the allergic response, with *Dr. P. J. Quinn*.

**Dr. R. M. Batt, Department of Veterinary Pathology, University of Liverpool:**  
Technical assistance, expenses and equipment for three years, for an investigation of the pathogenesis of a naturally-occurring enteropathy in the dog.

**Dr. W. F. Blakemore, Department of Clinical Veterinary Medicine, University of Cambridge:**  
Extension of technical assistance, expenses and equipment for two years, for quantitative studies on nerve fibres in the central nervous system.

**Mr. M. A. Camburn, Department of Veterinary Surgery, University of Edinburgh:**  
Research expenses for two years, for a study of the regurgitation and reflux of ruminal contents during anaesthesia in sheep, with *Dr. D. F. Cottrell*.

**Professor A. D. Carr, Department of Animal Physiology and Nutrition, University of Leeds:**  
Research assistance, expenses and equipment for three years, for a study of phosphate homeostasis in ruminants and its relationship to the control of vitamin D metabolism.

**Dr. R. Curtis, Small Animals Centre, Animal Health Trust, Newmarket:**  
Extension of technical assistance and research expenses for one year, to study lens luxation in the dog.

**Dr. W. P. H. Duffus, Department of Clinical Veterinary Medicine, University of Cambridge:**  
Research assistance, expenses and equipment for three years, for a study of natural killer cells and interferon in cattle.

**Dr. R. W. Else, Department of Pathology, Royal (Dick) School of Veterinary Studies, University of Edinburgh:**  
Technical assistance and expenses for three years, to study the antigenicity and receptor status of normal and neoplastic canine mammary cells, with *Dr. Mary Norval*, Department of Bacteriology.

**Dr. G. Fraser, Department of Veterinary Pathology, Royal (Dick) School of Veterinary Studies, University of Edinburgh:**  
Research expenses and equipment for three years, for a study of defective strains of Newcastle disease virus isolated from persistently infected cell cultures.

**Dr. Susan Haywood, Department of Veterinary Pathology, University of Liverpool:**  
Extension of research assistance and expenses for one year, to continue her study of the mechanisms of toxicity and tolerance in copper poisoning.

**Dr. N. P. Hodson, Department of Anatomy, Royal Veterinary College, London:**  
Research assistance, expenses and equipment for one year, for an investigation of Grass Sickness in horses, with *Dr. S. R. Bloom*, Royal Postgraduate Medical School, London.

**Dr. Ellen E. E. Jarrett, Department of Veterinary Parasitology, University of Glasgow:**  
Research assistance and expenses for three years, to study the role of IgE in helminth infection and allergic disease.

**Dr. N. K. Jenkins, Department of Physiology and Biochemistry, University of Reading:**  
Research expenses for three years, for a study of neuroendocrine factors in the regulation of sodium metabolism in the bovine, with *Professor F. R. Bell*.

**Dr. D. M. Jenkinson, Department of Physiology, University of Glasgow:**  
Technical assistance, expenses and equipment for three years, for a comparative study of sweat gland function.

**Mr. C. L. Johnson, Department of Animal Physiology and Nutrition, University of Leeds:**  
Research assistance and expenses for two years, to undertake an analysis of vitamin B<sub>12</sub> in ruminant animals, with *Dr. S. B. Telfer*.

**Professor D. F. Kelly, Department of Veterinary Pathology, University of Liverpool:**

Technical assistance, expenses and equipment for three years, for a study of amyloidosis in cats.

**Dr. A. Marr, General Veterinary Practice, Sevenoaks:**

Research assistance and expenses for a further six months, for a field investigation of some aspects of bovine mastitis control.

**Dr. R. J. Martin, Department of Veterinary Pharmacology, Royal (Dick) School of Veterinary Studies, University of Edinburgh:**

Research assistance, expenses and equipment for two years, to study the effect of anaesthetic agents on neurotransmitter responses.

**Dr. A. R. Michell, Department of Physiology, Royal Veterinary College, London:**

Research expenses and equipment for three years, for a study of renal and non-renal aspects of electrolyte physiology in the sheep.

**Dr. L. N. Owen, Department of Veterinary Medicine, University of Cambridge:**

Technical assistance and research expenses for three years, to study viral activity in canine mammary glands.

**Dr. G. W. Pettigrew, Department of Biochemistry, Royal (Dick) School of Veterinary Studies, University of Edinburgh:**

Research expenses and equipment for three years, for a study of the respiration of *Campylobacter sputorum* subsp. *mucosalis*.

**Mr. P. D. Rossdale, Equine Research Station, Animal Health Trust, Newmarket:**

Research assistance and expenses for two years, for a study of adrenocortical and adrenomedullary function in the newborn foal.

**Dr. P. H. Russell, Department of Microbiology and Parasitology, Royal Veterinary College, London:**

Additional research expenses for one year, for an analysis of the envelope proteins and virulence of Newcastle disease virus, using monoclonal antibodies and avian T cells.

**Dr. G. R. Smith, Nuffield Laboratories of Comparative Medicine, The Zoological Society of London:**

Technical assistance, expenses and equipment for three years, for a study of gram-negative anaerobic infections in zoo animals, with special reference to necrobacillosis in wallabies.

**Professor J. D. Smyth, Department of Pure and Applied Biology, Imperial College of Science and Technology, University of London.**

Research assistance, expenses and equipment for three and a quarter years, for studies on strain differentiation and the epidemiology of *Echinococcus granulosus* in Kenya and the United Kingdom, with Dr. D. P. McManus.

**Professor E. J. L. Soulsby, Department of Clinical Veterinary Medicine, University of Cambridge:**

Research assistance, technical assistance and expenses for three years, for a study of *Toxocara vitulorum* infection in the buffalo calf: developmental cycle and pathophysiology.

**Dr. A. Tait, Department of Genetics, University of Edinburgh.**

Research and technical assistance, expenses and equipment for three years, to study the characterisation of the surface and stage specific proteins of *Theileria annulata*, and their role in the immune response of the host, with Mr. C. G. D. Brown, Centre for Tropical Veterinary Medicine.

**Professor G. M. Urquhart, Department of Veterinary Parasitology, University of Glasgow:**

Research assistance and expenses for a further year, to study tick pyaemia in lambs, with particular reference to the occurrence of immunosuppression associated with intercurrent infection by *Ehrlichia phagocytophila*, with Dr. P. H. Holmes.

**Mr. K. A. Urquhart, Department of Medicine, Royal Veterinary College, London:**

Technical assistance, expenses and equipment for two years, for a study of factors affecting glycogen concentration in equine skeletal muscle.

**Dr. J. K. Waage, Department of Pure and Applied Biology, Imperial College of Science and Technology, University of London:**

Research assistance, expenses and equipment for three years, for a study of the determinants of feeding success in blood-sucking fly communities.

**Dr. Barbara M. Q. Weaver, Department of Veterinary Surgery, University of Bristol:**

Extension of technical assistance and expenses for fifteen months, for pharmacokinetic studies of anaesthetics in large animals.

**Dr. C. J. Webster, Department of Microbiology and Parasitology, Royal Veterinary College, London:**

Research expenses and equipment for one year, to study the refinement of a technique for an assay of bacterial endotoxins in biological fluids.

In addition to the grants listed above, a further 26 grants of less than £2,000 each were awarded for veterinary research.

## D. HISTORY OF MEDICINE

### RESEARCH FELLOWSHIPS

**Dr. Païna G. Abir-Am, Institute of History and Political Sociology of Science, University of Montreal, Canada:**  
Fellowship and expenses for one year, for further studies on 'The Early Days of Molecular Biology: A Treatise on the Social Control of Transdisciplinary Knowledge', under *Dr. W. F. Bynum, Wellcome Institute for the History of Medicine, London.*

**Mr. M. Barfoot, History of Medicine and Science Unit, University of Edinburgh:**  
Fellowship and expenses for two years, for further research into 'A Critical Edition of Cullen's Lectures on the Institutes of Medicine', under *Mr. M. Nicolson.*

**Dr. Stephanie M. Blackden, History of Medicine and Science Unit, University of Edinburgh:**  
Fellowship extension for one year, and expenses, to study the Poor Law and Health: Parochial Medical Aid in Scotland, 1845-1914, under *Professor E. G. Forbes.*

**Dr. R. J. Cooter, Wellcome Unit for the History of Medicine, University of Oxford:**  
Fellowship and expenses for one year, for studies on 'Anodynes and Antidotes: heterodoxy in the age of medical professionalization', under *Dr. C. Webster.*

**Miss F. M. Getz, Centre for Medieval Studies, University of Toronto, Canada:**  
Fellowship and expenses for two years, to complete an edition of 'The Middle English Gilbertus Anglicus' found in the Wellcome Institute archives, under *Dr. V. Nutton, Wellcome Institute for the History of Medicine, London.*

**Dr. L. S. Jacyna, Wellcome Institute for the History of Medicine, London:**  
Fellowship extension and expenses for one year, to study cell theory and medical science in Britain, 1840-1885, under *Dr. W. F. Bynum.*

**Dr. P. Kresger, St. John's College, University of Oxford:**  
Fellowship and expenses for nine months, to prepare for publication four papers on aspects of the History of Medical Statistics, under *Mr. E. W. Ardenner.*

**Mr. I. M. Lonie, Wellcome Unit for the History of Medicine, University of Cambridge:**  
Fellowship extension and expenses for one year, to complete his study of Hippocratism in European medicine in the sixteenth to eighteenth centuries, under *Dr. R. K. French.*

**Dr. I. S. L. London, Wellcome Unit for the History of Medicine, University of Oxford:**  
Fellowship and expenses for two years, to study the Dispensary Movement in England, 1770-1850: health care and morbidity during the Industrial Revolution, under *Dr. C. Webster.*

**Mr. N. D. Morgan, Wellcome Institute for the History of Medicine, London:**  
Fellowship and expenses for two years, to study medical biochemistry in England, 1860-1900, under *Dr. W. F. Bynum.*

**Dr. Ann R. Oakley, National Perinatal Epidemiology Unit, University of Oxford:**  
Fellowship extension for two years, and expenses, to continue her study of the development of antenatal care in Britain from 1900, under *Dr. I. Chalmers.*

**Dr. R. J. Palmer, Wellcome Institute for the History of Medicine, London:**  
Fellowship extension and expenses for one year, to complete his study on medicine and society in the Republic of Venice, 1450-1600, under *Dr. V. Nutton.*

**Mr. G. L. Rubinstein, Department of History and Philosophy of Science, University of Cambridge:**  
Fellowship and expenses for three years, to study the Methodist school of medicine, under *Dr. R. K. French, Wellcome Unit for the History of Medicine.*

**Dr. R. J. van Pelt, Sir Thomas Browne Institute, University of Leiden, The Netherlands:**  
Fellowship and expenses for two years, to study Health and Architecture in England, 1500-1800, under *Dr. V. Nutton, Wellcome Institute for the History of Medicine, London.*

**Dr. Anne M. Wilkinson, Nuffield College, University of Oxford:**  
Fellowship and expenses for three years, to study the ecology of the communicable diseases and the development of preventive techniques for their control in eighteenth, and later nineteenth century London, under *Professor P. Mathias, All Souls College.*

**Mr. A. F. Wilson, Wellcome Unit for the History of Medicine, University of Cambridge:**  
Part-time fellowship and expenses for two years, for research on 'William Smellie's Obstetric Practice', under *Dr. R. K. French.*

### RESEARCH TRAINING SCHOLARSHIPS

**Mrs. Deborah Dwork, Unit of History of Medicine, University College London:**  
Extension of her research training scholarship for two years, to complete her study of the Infant Welfare Movement, 1898-1918, under *Dr. W. F. Bynum.*

**Miss Ruth Harris, Wellcome Institute for the History of Medicine, London:**  
Research training scholarship for two years, to complete her study on 'Murder and Madness: Legal Psychiatry and Criminal Anthropology in Paris, 1880-1910', under *Dr. W. F. Bynum.*

**Miss M. A. Lally, Department of Social Science and Administration, London School of Economics and Political Science, University of London:**  
Research training scholarship for eight months, to study the development of services for the dying and the Hospice Movement, under *Professor B. Abel-Smith.*

Miss Lisa Rosner, History of Science Department, Johns Hopkins University, Baltimore, MD, U.S.A.:

Research training scholarship for one year, for a study on the training of physicians in eighteenth century Edinburgh, under Mr. M. Nicolson, History of Medicine and Science Unit, University of Edinburgh.

#### GRANTS FOR RESEARCH ASSISTANCE AND EXPENSES

**Dr. W. F. Bynum, Unit of History of Medicine, University College, London:**

Grants to provide a total of seven special scholarships for one year each, over the two-year period, for studies in the History of Medicine.

**Dr. A. G. Cock, Department of Biology, University of Southampton:**

Research assistance, expenses and equipment for one year, to prepare a microfilm edition and computer index of the William Bateson papers.

**Dr. Valerie A. Fildes, Wellcome Institute for the History of Medicine, London:**

Grant for expenses for two years, to prepare a book on the History of Infant Care and Paediatrics in Britain, 1500-1800, under Dr. W. F. Bynum.

**Dr. A. Z. Iskandar, Wellcome Institute for the History of Medicine, London:**

Grant for expenses over two years, to enable him to complete his research into the history of medieval Arabic medicine.

**Professor B. Matthews, Department of Physiology, Bristol University Medical School:**

Personal support and expenses over two years for Dr. J. M. N. Boss, for his research on the relation of clinical medicine to natural sciences, with particular reference to Dr. Francis Glisson (1597-1677).

**Dr. S. C. Reif, Taylor-Schechter Genizah Research Unit, Cambridge University Library, University of Cambridge:**

Research assistance and expenses for two years, to study the medical fragments in the Taylor-Schechter Genizah Collection and their special significance for the history of medicine.

**Dr. C. Webster, Wellcome Unit for the History of Medicine, University of Oxford:**

Research assistance and expenses for two years, to produce an index of biographical notices in British medical journals and related sources, 1750-1850.

**Dr. J. M. Winter, Department of History, University of Cambridge:**

Grant for expenses for a further nine months, to provide additional support to prepare a permanent archive of the Ministry of Pensions' records of officers and men who served in the First World War.

**Mr. D. Wujastyk, Brasenose College, University of Oxford:**

Grant for expenses for two years, for researches on the Wellcome Sanskrit Collection in the Wellcome Institute for the History of Medicine, London.

#### GRANTS IN AID OF PUBLICATION

**Mr. L. T. Morton, Pinner, Middlesex:**

Grant for expenses for two years, to prepare a fourth edition of a Medical Bibliography.

**Professor M. Putscher, Forschungsstelle des Instituts für Geschichte der Medizin, Cologne, West Germany:**

Contribution towards the publication costs of 'Clio Medica'.

#### SYMPOSIUM SUPPORT

Seminar on American Indian Medicine, to be held during the 44th International Congress of Americanists; Manchester, September 1982.

Conference on 'Medicine in the Sixteenth Century'; Cambridge, September 1983.

In addition to the grants listed above, a further 28 awards of less than £2,000 each were made in the History of Medicine during the two-year period under review.

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