WHO'S ROLE IN THE DEVELOPMENT AND COORDINATION OF BIOMEDICAL RESEARCH: GREATER INVOLVEMENT OF THE REGIONS IN RESEARCH

Progress report by the Regional Director

1. INTRODUCTION

Resolution WPR/RC27/R9, adopted by the Regional Committee at its twenty-seventh session, approved the recommendations of the Regional Advisory Committee on Medical Research (RACMR) that:

"(1) the Institute for Medical Research, Kuala Lumpur, Malaysia, be strengthened, and eventually designated a WHO regional centre for research and training in tropical diseases;

(2) close cooperation be developed with the multidisciplinary programme of operational research in the Republic of Korea; and

(3) three task forces be established to advise on the development of regional research programmes in health services, in parasitic and other communicable diseases and in cardiovascular diseases."

The Regional Committee, realizing that additional funds would be required to implement the recommendations, requested the Regional Director:

"(1) to take the necessary steps, as far as funds become available, to implement the decisions reflected ....... above;

(2) to request the three task forces to develop estimated budgets for future research and administrative overheads, for review by the Regional Advisory Committee on Medical Research and presentation to the Regional Committee;"
(3) to continue approaching Member States, foundations and voluntary agencies for contributions to help in financing the research activities;

(4) to study further the setting up of a multidisciplinary research programme on schistosomiasis in the Philippines and to report thereon to the Regional Committee at its next session."

The Regional Committee also requested Member States and voluntary agencies to make funds and other forms of cooperation available for research activities in the Region.

2. ACTION TAKEN

2.1 Institute for Medical Research, Kuala Lumpur

Dr A.A. Buck, Chief Medical Officer, Research Coordination, Epidemiology and Training unit, Division of Malaria and Other Parasitic Diseases, WHO, Geneva, visited Malaysia from 12 March to 29 April 1977 to cooperate with the Government in preparing detailed plans for developing the Institute for Medical Research as a multidisciplinary WHO regional centre for research and training in tropical diseases and to prepare a draft agreement between the Government of Malaysia and WHO for the purpose. His recommendations are attached as Annex 1.

Dr Buck recommended that, in view of the manpower situation in Malaysia and at the Institute, WHO should recruit a minimum of four senior scientists, one of whom would serve as resident coordinator for research, to provide expertise in all those disciplines for which national specialists were not available. The senior scientists required included an epidemiologist, a biostatistician, an immunologist and a clinical nutritionist. He also recommended that development of the Institute for Medical Research as a regional centre should be gradual or spread over a number of years as indicated in a tentative timetable included in the report.

2.2 Feasibility of a multidisciplinary research programme on schistosomiasis in the Philippines

Dr H.M. Gilles, Professor Chevalier, Department of Tropical Medicine, School of Tropical Medicine, University of Liverpool, United Kingdom, undertook the assignment as WHO consultant and an extract from his report is attached as Annex 2. He noted that research on schistosomiasis met the criteria formulated by RACMR for the selection of priority research areas. He strongly recommended that a multidisciplinary research programme be established in the Philippines in close association with existing national institutions that have expressed interest in such research. WHO would need to provide additional scientific and logistical support to the
existing facilities to enable them to carry out a vigorous research and training programme. Also, the programme would have to be part of WHO's global schistosomiasis research programme.

2.3 Task forces

2.3.1 Task force for health services research

Two meetings of the task force were held, from 30 November to 6 December 1976 and on 21 and 22 April 1977. The first meeting considered the definition of health services research (HSR), its scope and problem areas, and suggested solutions. The second meeting formulated general principles and a mechanism for processing HSR proposals, reviewed a number of proposals already made, endorsed some of them for approval by RACMR, proposed that a regional workshop on HSR be conducted in 1978, considered the progress and development of the Korean Health Development Institute and drew up a plan outlining the task force's role in the future.

2.3.2 Task force for cardiovascular diseases

The task force did not meet but informal contacts and correspondence took place among the members enabling them to formulate a programme. It was recommended that consultants visit countries in the Region to obtain first-hand knowledge of the cardiovascular disease problems, particularly the distribution of rheumatic fever and rheumatic heart disease, blood pressure, hypertension and coronary heart diseases, and the research opportunities within the Region. It was also proposed that a training course in cardiovascular diseases epidemiology be held in 1978.

2.3.3 Task force for parasitic and other communicable diseases

The task force did not meet formally, but through informal contacts the members considered and endorsed for approval by RACMR a number of research proposals prepared by a WHO Headquarters staff member in consultation with national staff. Subsequently, it was recommended that this group be renamed task force for parasitic diseases and leprosy and a further task force for communicable diseases and other research areas be formed.

2.4 Requests for extrabudgetary funds

On 26 October 1976, 2 November 1976 and 26 November 1976 letters were sent to Member governments, transmitting copies of resolution WPR/RC27.R9 and calling attention to its operative paragraphs 5(3) and 6 on financial and other forms of cooperation for research activities. To date, only three Member governments have replied, all of them regretting their inability to contribute owing to their tight financial situation.

It is however gratifying to note that the Japan Shipbuilding Industry Foundation, through the WHO Voluntary Fund for Health Promotion, made a grant of US$ 136 740 to support filariasis

Annex 3 provides a list of members of the various task forces.
research in Samoa. Furthermore, the Foundation agreed in principle to support schistosomiasis research, dengue haemorrhagic fever research and research promotion and development activities in the Western Pacific Region in 1977 if RACMR so recommended.

2.5 Medical Officer, Research Promotion and Development

Dr D.M. Macfadyen (United Kingdom) was assigned as medical officer, research promotion and development, being scheduled to report for duty by mid-August 1977.

2.6 Regional Advisory Committee on Medical Research, Second Session, 25-27 April 1977

RACMR held its second session from 25 to 27 April under the chairmanship of Sir Gustav Nossal. Two new members were appointed. RACMR reviewed and endorsed the following documents and proposals for consideration by the Regional Committee:

(1) report of Dr Buck on plans for development of the Institute for Medical Research, Kuala Lumpur, Malaysia as a WHO regional centre for research and training in tropical diseases (see Section 2.1 and Annex 1);

(2) report of Dr Gilles on the feasibility of setting up a multidisciplinary research programme on schistosomiasis in the Philippines (see Section 2.2 and Annex 2);

(3) proposal for holding a workshop on health services research in 1978;

(4) proposal for conducting a course on cardiovascular diseases epidemiology in 1978;

(5) background information and data on research promotion and development in the Region (see Annex 4);

(6) proposed additional budget for research promotion and development from 1977 to 1979 providing for allocation of $ 175 700 in 1977, $ 449 300 in 1978 and $ 517 000 in 1979, the funds being obtained from the Regional Director's Development Fund, from the WHO Special Programme for Research and Training in Tropical Diseases and from contributions to the WHO Voluntary Fund for Health Promotion by Member governments and foundations (see Annex 5).

3. PROPOSALS

The Regional Committee's decision on the recommendations of RACMR as contained in Section 2.6 above is requested. Attention is called to the fact that research promotion and development is one of the six priority areas in the WHO Sixth General Programme of Work covering the period 1978-83.
4. RELATIONSHIP OF REGIONAL RESEARCH ACTIVITIES TO THE SPECIAL PROGRAMME FOR RESEARCH AND TRAINING IN TROPICAL DISEASES

In its deliberations, the RACMR noted that four of the six groups of diseases (malaria, schistosomiasis, filariasis, trypanosomiasis, leprosy and leishmaniasis) to be considered initially under the Special Programme for Research and Training in Tropical Diseases, were serious public health problems in the Western Pacific Region and had priority in proposed research activities. It considered that a substantial portion of the total regional effort in research should be regarded as part of the Special Programme, Regional research activities will therefore develop in close collaboration with the activities of the Special Programme which has two interdependent objectives: (1) development of improved tools needed to control tropical diseases; and (2) strengthening of biomedical research capability in tropical countries.
ANNEX 1

PLANS FOR DEVELOPMENT OF THE INSTITUTE FOR MEDICAL RESEARCH, KUALA LUMPUR, MALAYSIA, AS A WHO REGIONAL CENTRE FOR RESEARCH AND TRAINING IN TROPICAL DISEASES

RECOMMENDATIONS

by

Dr A.A. Buck

1. Expatriate staff

1.1 Essential requirements

The manpower situation in Malaysia and at the Institute for Medical Research is such that WHO should recruit a minimum of four senior scientists to provide the expertise in all those disciplines for which national specialists are not available. The staff required include an epidemiologist, a biostatistician and a statistical clerk; an immunologist and research assistants; a clinical nutritionist; and auxiliary personnel as necessary. At a later time, when the programme of the WHO regional centre for research and training in tropical diseases is fully developed, other experts in entomology, mycology, clinical pharmacology and computer science will be needed. It must be realized that the expatriate staff provided by WHO will not necessarily have national counterparts and that for these reasons two conditions should be met:

(1) the expatriate specialists themselves should be capable of carrying out independent research in their respective fields and remain in their posts during the critical time needed to train national specialists;

(2) as soon as possible, the Government should select sufficiently qualified and motivated young scientists to receive the formal and practical training required to take over the positions of the expatriate specialists.

1.2 Recruitment

In recruiting expatriate staff for the key positions of the regional centre, WHO is requested to consult closely with the Malaysian health authorities to avoid the difficulties of the past when there were misunderstandings about the qualifications of experts as requested by the Government and as provided by WHO.

---

1Dr A.A. Buck, Chief Medical Officer, Research Coordination, Epidemiology and Training unit, Division of Malaria and Other Parasitic Diseases, WHO, Geneva.
2. Tentative research programme

2.1 Malaria

The initial step should be to make a clearer definition of the malaria situation throughout Malaysia. For this operation the Institute should serve as a scientific clearing house for all government and private institutions in the country that are engaged in malaria research and control. Information should be obtained on the prevalence, incidence and distribution of malaria and on the epidemiological patterns of active malaria transmission in the different population groups by geography, by culture and whether they belong to the Armed Forces or the Police. The number of laboratories capable of determining resistance of malaria parasites to the 4-aminoquinines should be increased by offering training courses at the Institute with WHO support. This capability is needed for studies to clarify the distribution and magnitude of the resistance problem. The actual and potential role of anopheline vectors should be investigated in those areas of Malaysia where major ecological changes are taking place as a result of land development and reclamation projects. The on-going drug trials should be extended and the study protocols be aligned with those used in the WHO Special Programme for Research and Training in Tropical Diseases. When more manpower becomes available, the unique opportunities of the Institute for experimental research on malaria in primates should be fully utilized.

For initiation of the systematic drug trials and for experimental research on malaria it is recommended that WHO experts be made available as consultants. For better coordination of malaria surveillance, the chemotherapeutic research and the immunological studies, it is recommended that the Institute establish a national scientific working group on malaria along the lines recommended in the WHO Special Programme for Research and Training in Tropical Diseases.

2.2 Filariasis

The on-going surveys for mapping the geographical distribution of filariasis should be extended to include the States of Sabah and Sarawak where major foci of the disease are thought to exist. The Division of Filariasis Research needs to transfer its voluminous research data to tape or disc for detailed computer analysis. The future research should emphasize various areas of importance. Longitudinal, multidisciplinary studies of filariasis (B. malayi and W. bancrofti) before and after control of the infection with diethylcarbamazine (DEC) should be carried out combining clinical, parasitological and entomological parameters for quantitative measurement. Standard diagnostic tests (20 and 60 mm$^3$) and concentration methods should be employed. It would be essential to determine residual infections in areas where DEC treatment had been given and compare their prevalence and intensity in populations where the total doses of DEC had been different. The
incidence (including relapses and new infections) of microfilaraemia and of clinical signs of filariasis should be determined as a function of time. The capacity of the known and suspected vectors transmitting ultra-low-density filariasis should be investigated.

At a later stage, when adequate facilities become available, the regional centre should undertake studies on the immunology of filariasis both in experimental animals and in man. At that time, arrangements should be made to have the regional centre participate in the programme of secondary screening of new filaricidal drugs, featuring animal models for infections with *Brugia* and *Breinlia* and including experiments with leaf monkeys for *S. malayi*. WHO should provide advice for this purpose.

In view of the concentration of specialists in filariasis in Kuala Lumpur, Penang and Singapore, a scientific working group on filariasis, under the aegis of the regional centre and along the lines of similar groups operating under the WHO Special Programme for Research and Training in Tropical Diseases, should be established.

### 2.3 Schistosomiasis

No immediate action is planned. When Dr Lie Kian Joe, Research Parasitologist, Department of International Health, University of California, returns to Kuala Lumpur, his research programme as well as permission to maintain the life cycles of *S. mansoni* and *S. japonicum* in the laboratory, should be discussed. Areas of importance for the research under the WHO Special Programme for Research and Training in Tropical Diseases in which Dr Lie and his associates could make significant contributions include: the infection capacity of the snails, including immunity; studies of antagonism; the effect of age; and limiting factors in the intensity of infection by miracidia. Other studies of interest to WHO concern the mechanism of penetration of the miracidia; host-specificity; metabolic pathways; and genetics.

If it is decided to set up a scientific working group on filariasis, it should establish a close working relationship with the proposed multidisciplinary research programme on schistosomiasis in the Philippines. This cooperation could easily be arranged under the terms of reference of the regional centre.

### 2.4 Leprosy

The National Leprosy Control Centre at Sungei Buloh, Selangor, is already participating in the leprosy subprogramme of the WHO Special Programme for Research and Training in Tropical Diseases; and Dr M.F.R. Waters, Director of the United Kingdom Medical Research Council Leprosy Research Unit at the National Leprosy
Control Centre, is also a member of the scientific working group for research on the chemotherapy of leprosy (THELEP) of the Special Programme. For development of a coordinated training programme at the Leprosy Centre and research projects of mutual interest, the Institute should take the necessary steps to establish formal links between the two institutions under the umbrella of the regional centre.

2.5 Other diseases

Also included in the regional priorities for intensified research are scrub typhus, dengue and other arbovirus infections, and nutritional aspects of tropical diseases. The existing research programmes for scrub typhus and dengue are strong, have adequate manpower and equipment and are under competent leadership. The proposed research on the nutritional aspects of parasitic and other tropical diseases cannot be formulated at this time and must await the arrival of a competent clinical nutritionist.

3. Plan for development of the regional centre

Development of the regional centre should be gradual, being spread over a number of years. At first a senior scientist should be appointed to serve as the resident coordinator for the research. He could be one of the four key scientists constituting the group of critical manpower, i.e. epidemiologist, biostatistician, immunologist and clinical nutritionist. Ideally, but not restrictively, the candidate should be a physician because of the gross deficiencies that now exist in the medical sector as reflected by the large number of vacancies at the Institute. The resident coordinator, in addition to being a renowned specialist in his own field, should possess good administrative abilities and have demonstrated leadership potential in a research programme in a developing country. After taking up the post, he should set the pace and give directions for the further development of the regional centre in continued and close cooperation with the Director and Deputy Director of the Institute. He should have a full-time secretary, as well as a car and driver. Once the resident coordinator has been appointed, other senior members of the expatriate staff can be recruited. Undoubtedly, there will be difficulties in finding the full range of specialists in a relatively short time. For this reason, it is of paramount importance for successful development of the regional centre that care be exercised in the selection of the resident coordinator who should be the first to be on the spot.

A tentative plan and timetable for development of the regional centre is given below, starting with the appointment of the resident coordinator.
Year 1. Recruitment of a biostatistician, epidemiologist, statistical clerk, clinical nutritionist, immunologist, secretary and typist. Purchase of two Land-Rovers. At the end of year 1: establishment of a division of epidemiology and biostatistics.

Year 2. Transfer to the Institute of the WHO immunology research and training centre presently located in Singapore; recruitment of a research laboratory technician and a second clerk-typist; purchase of a second car.

Year 3. Full development of comprehensive and integrated research programmes; establishment of field research stations.

Year 4. Designation of national counterparts for on-the-job training.

Year 5. Departure of some senior staff members from the regional centre and their replacement by national scientists.

4. Miscellaneous recommendations

4.1 The Government should register the physicians of the international team at the regional centre as duly authorized to practice medicine in Malaysia according to the requirements of their research work and under the terms of reference for operating the regional centre that are mutually agreeable to the Government and WHO.

4.2 During research with human volunteers, especially in drug and vaccine trials for the control of tropical diseases at the regional centre, the interests of the patients and populations involved must be safeguarded. Therefore, the Institute should take steps for the creation of a human volunteers committee to which research projects involving patients and population samples must be submitted for approval.

4.3 Likewise, the Institute should establish an animal committee to attend to the quality and ethical aspects of experimental research on animals.

4.4 WHO should set up a special fund (1) for financing short periods of study leave by the staff of the regional centre, if considered necessary to promote its work, and enabling scientists from other areas of the Region to work at the regional centre and (2) for holding an annual conference in Kuala Lumpur at which the research and administrative achievements and problems can be discussed in detail.

4.5 It is recommended that the regional centre have access to computerized library services such as MEDLINE to facilitate research and speed up the accumulation of information.
4.6 For improvement of the curricula in the post-graduate courses at the Institute, for better coordination with the medical schools of the University of Malaya and the National University and for psychological and competitive reasons, it is recommended that the Institute's course for the Diploma in Applied Parasitology and Entomology be extended from six months to one full academic year and that the diploma be replaced by a degree equivalent to that of master of public health or master of health science.
MULTIDISCIPLINARY RESEARCH PROGRAMME ON SCHISTOSOMIASIS IN THE PHILIPPINES

by

Dr H. M. Gilles
WHO Consultant

1. Terms of reference

The purpose of the assignment was to advise the WHO Regional Director on the setting up of a multidisciplinary schistosomiasis research programme in the Philippines.

2. Background information

The main endemic focus of Schistosomiasis japonicum in the world is in the Philippines where it is estimated that approximately 621,000 people, out of a total of 3,965,000 exposed in the 12 known endemic areas, are affected. It is estimated that 60,116 hectares are snail infected areas. The institution of agricultural development schemes involving irrigation presents the danger of spread of the infection unless concomitant snail control measures are put into operation. In this context, it is gratifying to note that a ten-year comprehensive control programme has started with the phasing of activities closely linked with the National Irrigation Administration and the flood control and drainage programme of the Department of Public Works.2

Although, with current tools, eradication will rarely be achieved, highly motivated control programmes have resulted in a reduction in the prevalence, incidence and intensity of schistosomal infection, e.g. in China, Israel, Japan, St Lucia (Windward Islands) and Venezuela.

These successes have occurred where governments have recognized schistosomiasis as a priority health problem, motivation of both the government and the population has existed and skilled and interested personnel have been available.3

However, it is also obvious that better control tools in the fields of chemotherapy, specific acting molluscicides, diagnostic methods, etc., are still necessary as well as the development of

1 Professor Chevalier, Department of Tropical Medicine, Liverpool School of Tropical Medicine, University of Liverpool, United Kingdom.


sensitive techniques to measure morbidity and the socioeconomic effects of schistosomiasis. Basic studies on immunity, the long-term goal of producing an effective vaccine, and fundamental parasitology, e.g. culture techniques, are in their infancy.

The feasibility of WHO sponsorship in setting up a multidisciplinary research programme in the Philippines would clearly depend on the degree of involvement of the indigenous scientific community and the facilities available. The writer therefore interviewed national officials, heads of relevant institutions, research workers, and staff of on-going or planned schistosomiasis control projects and the research branch of the National Schistosomiasis Control and Research Service at Palo, Leyte. Prior to the writer's arrival three meetings of the national working group of the multidisciplinary research programme on schistosomiasis in the Philippines were held at the WHO Regional Office.

3. Objectives and logistics of the research programme

3.1 Introduction

The research programme in the Philippines should be part of the global schistosomiasis research programme of WHO. Such it will carry out research, development and assessment of tools. Existing facilities - of which there are clearly several in the Philippines - should be used rather than creating new ones. The institutes and departments specifically mentioned in this report should be strengthened by providing additional staff and equipment to enable them to prosecute a vigorous research and training programme.

Research activities should be of two kinds, i.e. those involving operational research on the application of knowledge in practical field programmes and those of a more basic nature.

3.2 Operational research

The various planned development projects mentioned earlier, some of which are still on the drawing board, provide an ideal opportunity for a careful scientific evaluation of existing control measures for *S. japonicum* infection. A well planned multidisciplinary study could provide invaluable information on the health and socioeconomic impact of the disease as well as an opportunity for the development of more sensitive techniques to measure morbidity. Moreover a study of the socioeconomic effects of schistosomiasis on communities presents a challenge for the development of research methodologies using a variety of disciplines including the behavioural sciences. The synergism between human schistosomiasis and other diseases and the extent to which schistosomiasis is an underlying cause of them should be better understood.

---

Such operational studies could be a blueprint of what can be achieved - in the way of health, socially, economically and agriculturally - when existing methods of control are used efficiently.

3.3 Basic research

It would be futile for several reasons to attempt to list all the possible basic research projects that could be contained in a long-term multidisciplinary programme. Firstly, two multidisciplinary international workshops held in New York and St Lucia (Windward Islands) in 1973 and 1975 (of which the writer was a member) made a comprehensive review of research needs and dealt with the research priorities in the four major objective areas of (i) epidemiology and control, including snail biology and fundamental biological studies; (ii) public health importance of the disease and socioeconomic effects; (iii) drug development; and (iv) immunology, immunopathology, immunodiagnosis, immunity and vaccines. The detailed deliberations of the combined workshops have been published. Secondly, a memorandum on the immunology of schistosomiasis which includes many recommendations for further research in this field is available. Thirdly, the national working group on the multidisciplinary research programme has provided several ideas as has the Department of Zoology of the University of the Philippines. Fourthly, a scientific working group on schistosomiasis met in Geneva in June 1977 to set rational priorities for research studies, action and funding.

3.4 Management of the research programme

A scientific working group (SWG) on schistosomiasis research should be formed to define the strategy for research and to plan, monitor and evaluate the research programme.

Detailed proposals constituting the basic blocks of the research programme would be considered by the SWG, which alone would be in a position to assess all relevant factors, interactions and overlaps and thus be able to accord priorities. If protocols are found deficient these should be appropriately amended if possible rather than rejected. It would be useful if at its first meeting the SWG produced a few detailed protocols, in the priority areas, for implementation by selected individuals or departments.


The SWG should ideally consist of nine persons representing expertise in the different fields. The WHO medical officer, research promotion and development would be the coordinator. An external senior scientist with wide experience in schistosomiasis research would be a member of the group. SWG would have the power to co-opt WHO staff and national or external scientists with special expertise for their opinions or service, for short or long periods; the Japanese consultants already involved in the research in Leyte would be an obvious group. Once the SWG has decided on the priorities for research, institutions and individuals will be invited to submit detailed protocols within the context of the priorities and will be informed of the research fellowships likely to be available. A steering committee composed of three persons will be selected among the members of the SWG. It will be responsible for the selection of candidates for fellowships and for monitoring research grants approved by the SWG.

The recommendations of the SWG would be forwarded to the task force for parasitic diseases and leprosy, which will be monitoring the other facets of the regional research activities.

A tentative timetable of events could be as follows:

(1) determination of composition of the SWG;
(2) convening of the SWG to decide on research priorities - selection of steering committee (three persons);
(3) invitation to individuals and institutions to submit research proposals;
(4) convening of the SWG to review proposals, the results of which will be considered in arriving at a decision on funding.  

A sequential plan of the research strategy would look like this:

Scientific working group (priorities; protocols; budget)  
Detailed research proposals (from institutions and individuals)  
Scientific working group (decisions)  
Task force for parasitic diseases and leprosy  
Regional Advisory Committee on Medical Research

---

1Proposals could be subjected to external review if and when it was deemed necessary.
A tentative composition of the SWG could be the following:

1 convenor and coordinator (WHO medical officer, research promotion and development)

3 medical specialists (with expertise in schistosomiasis)

1 zoologist

1 engineer

1 health educator/administrator

1 sociologist

1 economist

1 medical member of National Research Council

3.5 Manpower development

Fundamental to the strategies stated is emphasis on the maximum possible involvement of senior workers in the Philippines who could train young people in key disciplines, who would in turn train others, to provide a "multiplier" effect. The policy with respect to training and manpower development however must be based on national requirements and career opportunities. In this context, the greatest problems are likely to be encountered with medically trained personnel. Staff working within the research programme could be considered - as persons working in some institutions already are - as being outside the jurisdiction of the Wage and Position Classification Office (WAPCO). This would enable government and other employing institutions, e.g. University of the Philippines to offer attractive salaries to both senior and junior workers (research professors at various levels: assistant, associate and full). Posts could be created in various departments with salaries which are competitive even if not identical to those in the private sector, on the reasonable assumption that job satisfaction will compensate for the financial disparity, providing it is not too great.

A definite policy on fellowships should be established. In general, these should be undertaken in the Philippines and only exceptionally abroad; and if the latter category for only part of the time. In addition to the SWG steering committee, the senior national under whom the fellowship is to be held should have an important say in the selection of candidates whose motivation, in addition to academic excellence, should be carefully assessed. Nationals from elsewhere, e.g. Indonesia, Thailand could be trained under the research programme.

If deemed possible it would be useful for the WHO medical officer, research promotion and development to visit schistosomiasis research institutes in China.
4. Conclusions

The meeting of the Western Pacific Regional Advisory Committee on Medical Research held in Manila from 29 June to 1 July 1976 considered the general question of establishing criteria that could be applied in the selection of priority areas for research. The writer has taken the liberty of relisting some of them since they succinctly formulate the justification for setting up a multidisciplinary research programme on schistosomiasis in the Philippines.

(1) "The research should relate to a priority health problem".

S. japonicum certainly does (see Section 2 "Background Information").

(2) "The priority should be recognized by the individual country".

It is (Presidential Decree No. 893 reconstitutes the National Schistosomiasis Control Commission into the Schistosomiasis Control Council).

(3) "The problem being tackled should be of major importance for the socioeconomic development of the country".

It is so far as we can measure it.

(4) "The problem should have a demonstrable potential for solution or further clarification within a reasonable time and reasonable cost".

Hopefully it does have. The results with the new antischistosomal drug Embay, for example, are most encouraging and if substantiated could make a great impact on control.

(5) "Programmes, whether large or small, should be developed with major involvement and contribution of the scientific communities and facilities of the country concerned, and be seen as a means of enhancing national research aspirations, facilities and expertise".

This is certainly possible (the Institute of Public Health, the College of Medicine and the National Schistosomiasis Control and Research Service could all become involved to a greater or lesser extent in a multidisciplinary research programme).

1The first SWG meeting should last a full week.

2Document WPR/ACMR/76.13.
The writer strongly recommends therefore that, given the necessary inputs from WHO in additional scientific assistance and other logistical support, a multidisciplinary research programme on schistosomiasis be established in the Philippines in close association with the National Schistosomiasis Control and Research Service, the Department of Parasitology of the Institute of Health and the other national departments that seem to have expressed a genuine interest in the programme. Such a project however will demand much greater coordination and cooperation among the interested workers and institutes than exists at present. The WHO medical officer, research promotion and development, will have the task of mobilizing, guiding and enlisting this vital cooperation.

The multidisciplinary programme in the Philippines should receive considerable support from the WHO global schistosomiasis research programme, since this is the only highly endemic area in the world where research on S. japonicum can be carried out in situ.
MEMBERS OF TASK FORCES, REGIONAL ADVISORY COMMITTEE ON MEDICAL RESEARCH

1. Task force for health services research

Dr J.M. Flavier
Vice-President
International Institute of Rural Reconstruction
512 R. Salas Street
Ermita
Manila

Dr G.C. Salmond
Director
Management Services and Research Unit
Department of Health
Wellington
New Zealand

2. Task force for cardiovascular diseases

Dr I. Prior (Chairman)
Director
Epidemiology Unit
Wellington Hospital
Wellington
New Zealand

Professor Sir Gustav Nossal
Director
The Walter and Eliza Hall
Institute of Medical Research
Melbourne
Australia

Dr Z. Pisa
Chief
Cardiovascular Diseases Unit
WHO Headquarters
Geneva
Switzerland
3. Task force for parasitic diseases and leprosy

Dr R.S. Guinto (Chairman)
Leonard Wood Memorial
Cebu Skin Clinic
Cebu City
Philippines

Dr A.C. Reyes
Assistant Director of Health Services
WHO Regional Office for the Western Pacific
Manila

Dr N. Kosakai
Professor in Laboratory Services
Juntendo University Medical Schools
Bunkyo-ku
Tokyo
Japan

4. Task force for communicable diseases and other research areas

Dr K. Kobari (Chairman)
Director
Hamamatsu Medical Center
328 Tomitsuka-cho
Hamamatsu 432
Japan

Dr Byong-Seol Seo
Professor
Department of Parasitology
College of Medicine
Seoul National University
Seoul 110
Republic of Korea

Dr J. Laigret
Director
Institut de Recherches Médicales "Louis Malardé"
Boîte postale N° 30
Papeete
French Polynesia
1. **Policy basis**

The policy is based on:

(1) the WHO Constitution;

(2) World Health Assembly and Regional Committee resolutions;

(3) the WHO Sixth General Programme of Work covering a Specific Period 1978-1983.\(^1\)

2. **Problem definition**

While the first regional programme of work covering a specific period (1957-1961) provided that the Regional Office should stimulate research, the second, third and fourth programmes stated that, being of a global nature, the research programme should remain the responsibility of WHO Headquarters and that the Regional Office would assist Headquarters in discharging that function within its area of responsibility. However, the machinery for consultation, coordination and implementation of research between WHO Headquarters and the Regional Office was not well defined; hence, the Regional Office had little knowledge of the research activities and resources in the Region. Data on research activities and facilities are being gathered and those on hand, while still meagre, indicate that:

(1) there is no fixed pattern of medical research administration in the countries or areas; in some, medical research councils or medical research administrations are non-existent;

(2) coordination and communication between research workers, even in the same country, could be improved;

(3) research institutions and research workers are generally concentrated in developed countries. For that matter, more WHO Headquarters support is being given to institutions and workers in the developed than in the developing countries or areas;

(4) there is a shortage, or even absence, of well trained and qualified research workers in the developing countries and areas of the Region where health problems are more severe. Research orientation may be such that the tendency is to undertake sophisticated studies of the kind learned while on training abroad rather than studies on problems of local importance. Qualified staff tend to migrate to other areas, while those who remain are either overloaded with work or do additional jobs to raise their income;

(5) research facilities in most developing countries or areas are poorly equipped and manned;

(6) research funding is inadequate and inappropriately distributed. As a result, studies may be limited to simple surveys and data gathering;

(7) there is limited access to biomedical information. Workers might thus be duplicating studies that have already been done or be unaware of significant developments in their own fields.

3. Objectives

Two general objectives with a number of related specific objectives may be stated:

3.1 General objective

This is to promote and collaborate in the development and coordination of biomedical and health services research.

Specific objectives

These are:
- to identify research priorities;
- to strengthen national research capabilities;
- to promote intercountry and interregional coordination and collaboration of research especially with respect to problems of major regional importance.

3.2 General objective

This is to promote the application and proper transfer of existing and new scientific knowledge and research methods to serve as the basis for development of comprehensive health services.

Specific objectives

These may be identified from the specific objectives of other programme profiles on communicable disease control, primary health care, etc.

4. Description of the programme, approaches and strategies

It is essential that pertinent information on various aspects of biomedical and health services research be gathered initially. The above information should relate to (1) institutions conducting research - their organization, facilities, manpower, funding and problems; (2) national medical research councils or administrations;
(3) funding institutions or possible sources of research funding; and (4) access to research information.

Through efforts by the WHO Representatives, WHO regional advisers and field staff, national staff and the Regional Advisory Committee on Medical Research, priority areas for research are being identified.

Once the above priority areas are known, the following approaches could be applied:

(1) stimulate the creation or further development of national health research councils or analogous groups;

(2) strengthen and further develop existing research institutions particularly in the developing countries or areas where health problems are more severe, through training of research workers, provision of consultants, award of research grants and assistance in securing additional funding;

(3) facilitate access to and develop exchange of research information through the establishment of a national, and subsequently a regional, library network;

(4) stimulate collaboration between countries or areas in the Region and subsequently between the regions through the establishment of a network of collaborating research and training centres;

(5) constantly review priority areas for research, with emphasis on the health research needs of developing countries or areas, through meetings of the task forces and expert groups of the Regional Advisory Committee on Medical Research;

(6) through conferences, seminars, meetings for the exchange of information, exchange of scientific workers and information services, foster close contact and collaboration between national health organizations, institutions and health administrators with a view to accelerating the application of advances and discoveries;

(7) assist in the development of methods for adapting research findings to meet the needs of countries or areas in the Region.
PROPOSED ADDITIONAL BUDGET
RESEARCH PROMOTION AND DEVELOPMENT
1977-79

1. Meetings

1.1 Task force for cardiovascular diseases
(5 persons x 3 days) $ 4 200 $ 4 600 $ 5 000

1.2 Task force for parasitic diseases and leprosy
(10 participants x 3 days) 13 800 15 000
(1 consultant - 2 weeks) 2 000 2 300

1.3 Task force for communicable diseases and other research areas
(5 participants x 3 days) 6 900 7 500
(1 consultant - 2 weeks) 2 000 2 300

1.4 Task force for health services research
(5 persons x 3 days) 4 600 5 200

1.5 Scientific working group on schistosomiasis
(10 participants x 3 days) 12 500 --- ---
(10 participants x 3 days) 13 100 14 400
(1 consultant - 1 month) 3 500 --- ---
(1 consultant - 2 weeks) 2 000 2 300

1.5.1 Steering committee on schistosomiasis
(5 persons x 3 days) 4 600 ---

1.6 Scientific working group on enteric infections
(10 participants x 3 days) 13 100 ---
(1 consultant - 2 weeks) 2 000 ---

1.7 Scientific working group on filariasis
(10 participants x 3 days) 11 900 --- 14 400
(1 consultant - 1 month) 3 500 --- 4 500
## 1.8 Workshop on health services research (Manila)
- Consultants 2 x 1 month: $---\$ 8,000 $---
- (15 participants x 10 days): --- 18,000 ---
- (Supplies and equipment): --- 1,000 ---

## 1.9 Training course on cardiovascular disease epidemiology (New Zealand)
- (1 course director - 3 months): --- 12,000 ---
- (10 temporary advisers x 2 days): --- 1,000 ---
- (10 participants x 3 weeks): --- 12,000 ---
- (Supplies and equipment): --- 1,000 ---

## 2. Staff

### 2.1 Regional Office

#### 2.1.1 3 consultant months to study the feasibility of organizing regional biomedical research information exchange
- 10,500 --- ---

#### 2.1.2 3 consultant months to review respiratory infections in the Region
- --- 12,000 ---

#### 2.1.3 3 consultant months to review leprosy problems
- --- 12,000 ---

#### 2.1.4 3 consultant months to review sexually transmitted diseases
- --- 12,000 ---

#### 2.1.5 2 consultant months to review filariasis
- --- --- 9,000

#### 2.1.6 3 consultant months to review the filariasis situation in the Region and recommend research to be done
- 10,500 --- ---
2.2 Institute for Medical Research, Kuala Lumpur

2.2.1 Possibly 6 consultant months for strengthening certain departments at the Institute for Medical Research

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>$21,000</td>
</tr>
<tr>
<td>1978</td>
<td>$24,000</td>
</tr>
<tr>
<td>1979</td>
<td>$27,000</td>
</tr>
</tbody>
</table>

2.2.2 3 full-term advisers (P.5 grade)

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>---</td>
</tr>
<tr>
<td>1978</td>
<td>$153,600</td>
</tr>
<tr>
<td>1979</td>
<td>$165,600</td>
</tr>
</tbody>
</table>

3. Research fellowships

3.1 Long-term

<table>
<thead>
<tr>
<th>Duration</th>
<th>Place of Study</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x 1 year</td>
<td>Western Pacific Region</td>
<td>$14,600</td>
</tr>
<tr>
<td>5 x 1 year</td>
<td>Western Pacific Region</td>
<td>---</td>
</tr>
</tbody>
</table>

Additional

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50,000</td>
</tr>
</tbody>
</table>

3.2 Short-term

<table>
<thead>
<tr>
<th>Duration</th>
<th>Place of Study</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 x 3 months</td>
<td>Western Pacific Region</td>
<td>$12,500</td>
</tr>
</tbody>
</table>

4. Grants-in aid

4.1 Schistosomiasis

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>$20,000</td>
</tr>
<tr>
<td>1978</td>
<td>$30,000</td>
</tr>
<tr>
<td>1979</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

4.2 Dengue haemorrhagic fever

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>$41,000</td>
</tr>
<tr>
<td>1978</td>
<td>$30,000</td>
</tr>
<tr>
<td>1979</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

4.3 Other grants-in aid

<table>
<thead>
<tr>
<th>Duration</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 x 3 months</td>
<td>$10,000</td>
</tr>
<tr>
<td>20 x 3 months</td>
<td>$20,000</td>
</tr>
</tbody>
</table>

Additional

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>$75,000</td>
</tr>
</tbody>
</table>

TOTALS

<table>
<thead>
<tr>
<th>1977</th>
<th>1978</th>
<th>1979</th>
</tr>
</thead>
<tbody>
<tr>
<td>$175,700</td>
<td>$449,300</td>
<td>$517,000</td>
</tr>
</tbody>
</table>