

# EDITORIAL: MEDICAL RESEARCH IN MALAYSIA

Medical research can be considered to include all systematic investigations aimed at developing new knowledge in biology, medicine, public health and related activities, and this includes the entire research spectrum ranging from fundamental laboratory research to the application of results in the field. Thus, it is evident that medical research is far ranging, starting from diagnosis and ending with treatment and has many aspects to it. The objects of medical research are the relief of human suffering and the improvement of the human society.

In Malaysia, medical research was pioneered by the Institute for Medical Research founded in 1900. Many noteworthy contributions in the prevention and control of diseases then prevalent, have emanated from the Institute. Although living on past laurels is to be deprecated, due recognition has to be given to earlier research workers who undertook their tasks with a missionary zeal in the country. Since the founding of new universities and medical faculties, the number of scientist and departments engaged in biomedical research has considerably increased. As such it is no longer tenable for any one institution to claim monopoly for medical research.

## FACILITIES FOR MEDICAL RESEARCH

The universities are well-equipped and have facilities comparable to those available in developed countries. Research has always been an integral part of the academic pursuit especially at universities and traditionally the environment at universities have been conducive for the promotion of research.<sup>1</sup> Malaysia, with its multiracial population and varying levels of socio-economic development, offers unique opportunities for medical research. The problems that we continue to face include the parasitic diseases, the communicable diseases, problems related to

maternal and child health, nutritional problems and problems related to the environment and affluence.<sup>2</sup>

The type of research varies in the different institutions. With so many disciplines in medicine, the range of research activities undertaken is wide. At present there is no national policy on medical research with definite general and specific objectives.<sup>3</sup> There is also no restriction on the field in which one can work. However, the universities, and in particular the University of Malaya, in recent years have encouraged direct research along lines that are likely to produce tangible results, paying special attention to those areas which could be applied to solving national problems.<sup>1</sup>

Tables I and II summarise the research publications and projects for a few years and give an idea of the progress of research activities in the country. However, one has to be cautious in interpreting the numbers, as there is a tendency for underreporting, as all questionnaires sent out are not returned. Not-with-standing the limitations, the progress made is promising.

Similarly the number of medical journals and related publications in Malaysia has increased over the last twenty-five years and bear testimony to the growing number of research publications.<sup>4</sup>

## FUNDING FOR RESEARCH

In 1981, just M\$3.1 million was allocated for university research — perhaps 25% of the amount needed.<sup>5</sup> At the University of Malaya, the allocation for all types of research was only 3.4% of the total operating budget, and out of this, the allocation for medical research was M\$ 94,000 or 11% of the total research allocation.<sup>1</sup> In all, fundings for the

**TABLE I**  
**DISTRIBUTION OF MEDICAL RESEARCH**  
**PROJECTS AND PUBLICATIONS IN MALAYSIA\***

PROJECTS			
Discipline	1980	1981	1982
Total number	242	259	320
Biomedicine (%)	60	74	80
Clinical Medicine (%)	29	17	11
Public Health (%)	11	9	9
PUBLICATIONS			
Discipline	1979	1980	1981
Total number	221	540	278
Biomedicine (%)	44	35	47
Clinical Medicine (%)	39	48	40
Public Health (%)	17	17	13

\*Source: Reports of the Medical Research Subcommittee, National Council for Scientific Research and Development, Malaysia.

**TABLE II**  
**MEDICAL RESEARCH AT THE**  
**UNIVERSITY OF MALAYA\***

	No. of Projects		No. of Publications
	Complete	Ongoing	
1964-1976	66	77	678
1981**	28	56	122

\*Source: Ungku A Aziz, Yip Yat Hoong, *Research projects and publications at the University of Malaya 1977*. Kuala Lumpur: University of Malaya Press, Ibid (1981).

\*\*The response rate to questionnaires sent was 69%.

nation's two dozen research and development institutions was reported not to exceed more than 0.6% of the GNP, whereas in Japan, it is about 2.6% of the GNP.<sup>5</sup> The total budget for the Institute for Medical Research in 1982 was M\$9 million.<sup>6</sup> The *New Straits Times* early in 1984 carried the price of a FE-5 fighter plane as M\$7 million, and that of a FE-20 as M\$11 million while reporting on the aircraft needs of the RMAF.<sup>7</sup> The priority accorded for medical research varies in different countries.

Unlike the developed countries, funds for medical research has to come for a long time from government appropriations. Funds from non-governmental sources are rather limited. In fairness, it must be said that the University of Malaya has never denied funds for viable research proposals.<sup>1</sup>

Investment in research should not be viewed with the results in mind. The spin-offs from research are varied. Similarly one must be cautioned against using cost benefit analysis in research. The quality of research output varies considerably from publication to publication, and this is also true with research projects. Often there is a time gap (sometimes several years) between investing in a research project and getting the results from it. Sometimes research has to be taken as a gamble and the research findings may not have immediate application.

One important facet of research and development is the training of research workers. Training may not provide immediate results, but will ultimately provide the country with outstanding research workers. Unless the research potential is increased, there cannot be continuity. Similarly the recognition of talented persons and their further training should receive equal consideration. In assigning funds for medical research, priority should be assigned to the support of training programmes for young research workers. Encouragement should be given to those medical scientists who are more practically minded to stay in the field of technological research.

Exhortations for dedication to the pursuit of scientific achievements would not be meaningful – unless it is also accompanied by prospects for career advancement and remuneration commensurate with his status as a researcher. In this context, it would be worth pointing out that financial disincentives do exist between the professionals in the basic medical sciences and their clinical colleagues. This situation is not conducive to attracting and retaining talented medical graduates in the medical faculties.

## PRIORITIES IN RESEARCH

In Malaysia, there is a tendency to emphasize too much on applied research. This would be a costly

mistake in the long run. It is to be realised that fundamental research would pave the way for applied research in many cases. Further, even in applied research, the division between need and feasibility is very difficult at times. While it is desirable to emphasize on problems of local relevance it should not be forgotten that emphasis on basic medical research, especially of a fundamental nature, must not be neglected. The arbitrary division of medical research into basic or fundamental, clinical and public health research and so on is undesirable, as the ultimate aim of all research is to help mankind maintain positive health. Further such divisions may jeopardise funding for essential research, as funding authorities may have preferences for particular types with emphasis often being placed on applied research at the expense of basic research.

In supporting research, new aspects should be taken into account. The development of new areas and encouragements of researchers to work on them is essential, keeping in mind always how to make the best use of resources available to help the people.

## **DISSEMINATION OF INFORMATION**

To ensure continued support for medical research, the findings and problems must be made available in a form readily assimilable by the policy makers, civil servants, community leaders and others in authority. It is necessary to translate research findings into practical terms for popular acceptance and implementation and for the further promotion of research. In helping administrators as well as those responsible for funding, as well as giving directions for research, they have to a large extent be influenced by information which is important for decision making. Administrators of research with full availability of information would have sufficient insight into research problems and into what research workers want.

It is encouraging to note that the Medical Research Subcommittee of the National Council for Scientific Research and Development, Malaysia, has been endeavouring to fulfill the needs for information and has during the last three years brought out annual publications on research activities in the country.<sup>8</sup> Similarly, the University of Malaya has also been

bringing out publications on research activities.<sup>1</sup> Though not exhaustive, both these publications provide sufficient information on the various research activities undertaken in the country. An evaluation of the publications as well as a critical analysis of the research projects would contribute significantly to the identification of gaps that do exist in the research programmes and the directions to be taken.

The ready availability of information makes the task of dissemination easier for the benefit of potential users and researchers, which would hopefully stimulate further research and collaboration, while at the same time help to alleviate wasteful duplication of research efforts.

## **RESEARCH COORDINATION**

Whereas research within organisations or institutions tends to be coordinated to varying extent, this does not appear to be the case when it comes to coordination between institutions in the country. Long-term research projects do not appear to be popular and it is also true for interdisciplinary and team research amongst institutions in the country. To improve this situation, it is desirable for those working in purely research institutions to have academic links and for those in the basic sciences to have links with the clinical sciences. By such involvement, it would become possible to have greater meaning to the research efforts and end results.

## **QUALITY OF RESEARCH**

With the growth of medical institutions and patient care activities, there is bound to be an increase in clinical research with its problems grouped around the sick individual. It is essential that the ethical aspects of medical research involving human beings be strictly adhered to in order to safeguard the interests of the subjects and the researchers. In this context, it is worthwhile to remember what Pickering said: "I should never subject a patient to an experiment that I would not be prepared to undergo myself or recommend to my wife or children, provided of course that we were placed in circumstances similar to those of the patient".<sup>9</sup>

Research findings benefit mankind in general and as such there is no place for political considerations in determining research activities. The failure to recognise this would only lead to stagnation in medical research. Similarly there is no place for mediocrity in medical research which would only stifle further progress.

## CONCLUSIONS

It should be realised that it would be beyond our resources to find answers to all our problems. So it becomes essential that better utilisation be made use of scientific and technological advances that we have been achieving elsewhere. The job of building a healthier nation through medical research cannot be the concern of the government alone even though there must be a national commitment for medical research with clear-cut objectives and policies.

Development and health are closely interrelated and so people who cannot obtain health cannot promote or fully benefit from development. Continuing efforts are essential in the fields of research, prevention and treatment of diseases to promote optimal health. For this we have to increase and strengthen our research capability. The task to be achieved is not an easy one. It is a major effort and it represents more than a scientific endeavour.

However the involvement required is minimal compared to the results that can be expected.

N. CHANDRASEKHARAN

## REFERENCES

- <sup>1</sup>Aziz U A, Yip Y H. *Research, Consultancy and Publications at the University of Malaya*. Kuala Lumpur: University of Malaya Press, 1981.
- <sup>2</sup>Chandrasekharan N. Relevance of Health and Medical Research to Health Problems in Malaysia. Proc. CAP Seminar on Health, Food and Nutrition. Penang: Consumers Association of Penang, 1979.
- <sup>3</sup>Chandrasekharan N. Promotion and Development of Medical Research in Malaysia. *Berita MMA*, 1979; 11: 1.
- <sup>4</sup>Malaysian periodicals pertaining to medicine, public health and dentistry, 1978. Kuala Lumpur, Medical Library, University of Malaya.
- <sup>5</sup>Editorial *New Straits Times*, 6 October, 1984.
- <sup>6</sup>Annual Report. Kuala Lumpur: Institute for Medical Research, 1982.
- <sup>7</sup>News item. *New Straits Times*, 21 February, 1984.
- <sup>8</sup>Report of the Medical Research Subcommittee. National Council for Scientific Research and Development, Malaysia, Kuala Lumpur, 1983.
- <sup>9</sup>Pickering G. In *Medical Research*. Geneva: World Health Organisation, 1970.