GUEST EDITORIAL

TWENTY-FIVE YEARS OF THE TROPICAL METABOLISM RESEARCH UNIT

"The word 'metabolism', in the title of the MRC Unit means literally 'changes' and refers to the sum total of the chemical reactions that occur in the body and that keep it alive. The study of particular disease states, or derangements of metabolism, and of the effects on metabolism of malnutrition and climate, may lead to a better understanding of the way in which the normal body works."

J. C. Waterlow, 1954.

Waterlow's perception of the need for a clinical research unit arose out of his research experiences in Africa and the Caribbean. He recognized that individuals working in isolation could make useful progress in addressing the problems of nutrition, one of the greatest challenges to medicine. However, for any real impact to be made on the basic problems requires a team of workers, freed from the demands of a major service role, with support and time to develop a logical, methodical approach. Generally the cost of setting up such a team is beyond the resources of a single institution. When approached, the Medical Research Council (MRC) of Great Britain, with its experience in organizing medical research, were receptive to the idea and set up a Unit at Mona, 25 years ago.

The choice of basing the Unit in Jamaica was not made accidentally. As Waterlow stated: "..... for good clinical control the conditions are complex; there must not only be material, but also competent physicians and nursing staff and all the facilities; above all, a factor which is most important, a very good atmosphere of teamwork. These conditions do exist at Mona". It was the first time that the MRC had set up a Unit linked with an overseas University, and this was to be a source of strength, and important for later developments. The Unit was able to function both as a resource and a point of focus within the Faculty of Medicine.

The original staff of Waterlow and Garrow worked initially out of the Departments of Physiology and Medicine until the building of the Tropical Metabolism Research Unit (T.M.R.U.) in 1956. With such an establishment it was possible to tackle those problems whose solutions were only likely to come to fruition in the longer term. This in no sense ignored or reduced the importance of problems which demanded a more immediate solution. By their very nature these could be more easily dealt with within the existing institutional framework.

Starting from the premise that "bad feeding would result in subtle alterations in the function of the body and its reaction to stress", an ambitious outline was drawn up of the initial series of investigations to be pursued. Time has shown that the investigations were selected wisely. Successive generations of workers by successfully tackling these topics have demonstrated the relevance of their elucidation to the progressive improvement in the successful care of seriously ill patients. Major advances in our understanding of electrolyte metabolism, the energy requirements for growth, protein turnover and trace mineral metabolism have reduced mortality in seriously malnourished children.
from 20% to virtually zero. Although an understanding of the pathophysiological processes in malnourished children has always been the focus of the experimental model, metabolic problems in the widest sense have been addressed.

The creation of a basic research unit allowed for the mutual interaction of fundamental and more applied research, bringing benefits to both which had not been expected. Basic research generates questions that can only be answered in the wider society. Over the past ten years increasing emphasis has been placed on understanding and influencing the social aspects of malnutrition. The long term effects on mental development have been tackled. The training of specialists in nutrition has increased the region's ability to plan a rational approach to the production and distribution of food.

The original objectives of the Unit led to the conscious development of a tradition of institutional research activity (Alleyne, 1980). This tradition has been zealously fostered and nurtured. In particular, emphasis has been placed on the training of individuals capable of maintaining and carrying on the tradition (Waterlow, 1974). Clinical research as a discipline in its own right has been developed. The tools and skills used by a clinician in arriving at a specific diagnosis are different from those used by the investigator in the pursuit of new knowledge. Each complements the other; each enriches the other. From this basis it was a special but logical development for the Unit to become fully part of the University in 1970, under Picou's directorship.

Research is an expensive pursuit and in addition to the University and Medical Research Council, the Unit has also received generous support from overseas funding bodies. That this investment has borne fruit has depended upon the collaborative human effort that has challenged nature to wrest her secrets from her by the careful application of the scientific method. The presence of an active research unit, able to react throughout the Faculty of Medicine, has been a source of great mutual benefit and has enabled:

"... T.M.R.U. to contribute by strengthening that current essential to the life of any university, which is concerned with the pursuit of knowledge for its own sake."

On its 25th Anniversary, the T.M.R.U. looks to the future of clinical nutrition in the developing world. A future that raises questions which demand resolution; questions at least as great as any that have been resolved in the past. The answers may not come quickly, but careful, painstaking endeavour will reap its own reward.

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