

*Papers from the Institute of Nutrition of
Central America and Panama***Introduction**

THE Institute of Nutrition of Central America and Panama (INCAP) was inaugurated in 1949 to determine the nutrition problems of its member countries, to find practical means of approaching their solution and to help the countries to apply these measures. It began with active participation of Guatemala, El Salvador and Honduras; Costa Rica and Panama became active members in 1950 and 1951, respectively, and Nicaragua in 1954.

The W. K. Kellogg Foundation was asked to assist in the founding of this new institute and did so not only by furnishing fellowships for training of personnel and funds for the purchase of basic equipment, but also by making a three-year grant to the Pan American Sanitary Bureau (PASB) to establish a nutrition section whose chief would also serve as the director of the new institute. The member countries requested the Pan American Sanitary Bureau, which shortly afterwards became also the regional office for the Americas of the newly established World Health Organization (WHO) to serve as the administrative agency for INCAP. A representative of the Ministry of Health of each member country and of PASB formed the Directing Council, and the basic budget was provided by equal annual quota contributions from each country. Each member country has also established a nutrition section in its Health Department staffed with trained personnel for the development of applied nutrition programs. The central In-

stituto was located in Guatemala City in a new building constructed by the government of Guatemala.

To determine the nutrition problems of the area, surveys of the dietary habits and nutritional status of the various socioeconomic groups within each member country were initiated. These in turn required laboratory facilities for the analysis of foods, the detection of parasites and anemias, and the biochemical evaluation of nutriture. As specific problems such as endemic goiter, kwashiorkor, marasmus and avitaminosis A were identified, and the extent of chronic protein malnutrition and retarded growth and development in preschool children were recognized, increasing emphasis was placed on studying these specific questions and developing practical approaches to their prevention. Inevitably, INCAP has also become deeply involved in studies of the relationships between nutrition and infection, the development of protein rich foods, specific amino acid requirements and interrelationship, amino acid supplementation of vegetable proteins and the relationship between diet and atherosclerosis.

As data became available from the surveys and other research activities, the application of this knowledge, through both training programs and the preparation of basic educational material, increased in scope and importance. Consultant and advisory service to both governmental and nongovernmental action

agencies within the member countries has also been a major activity.

Although INCAP was established for the countries of Central America and Panama, it early became important as a demonstration and training center for persons from all parts of Latin America and from many from other technically underdeveloped areas of the world. Last year, a formal two year course was initiated to prepare university graduates for the professions of dietitian, public health nutritionist and nutritionist in agricultural and education programs. It includes one year of academic study and one of internship. An intensive summer course for physicians with an advanced degree in public health was also inaugurated to be given alternatively in English and Spanish. It includes public health nutrition, evaluation of nutritional status and discussion of clinical nutrition problems from the point of view of public health and preventive medicine. In cooperation with FAO, a center for training in the technics of dietary surveys has also been established. Graduate research opportunities are also offered in all of the various major fields of INCAP activity.

Basic to the development of INCAP has been the policy of recruiting the professional staff from the member countries and arranging for them to receive thorough advanced training outside of the area. The sixteen senior members have a present total of fourteen Master's Degrees, six Ph.D.'s and four are physicians who are "board eligible" in their specialties. The results of this training policy are apparent not only in the demands on INCAP staff for consultant services to other areas but also in the scientific productivity. The current publications list includes 185 scientific articles in English, 255 in Spanish (including republication in Spanish of all articles appearing originally in English), 3 monographs, 30 student theses for various university degrees and nearly 150 educational and miscellaneous publications. INCAP is housed in a modern three story building in Guatemala City and administratively is divided into divisions of Public Health, Epidemiology, Statistics and Documentation, Physiological Chemistry, Agricultural and Food

Chemistry, Clinical Investigation, and Administration.

Its library receives over 200 journals, has approximately 25,000 reprints and an extensive collection of documents of UN agencies and miscellaneous publications in nutrition.

The articles which have been selected for this special INCAP issue reflect the varied lines of research now actively in progress in INCAP with the support, not only of the member countries and PASB, but also of the National Institutes of Health, the Nutrition Foundation, Inc. Williams-Waterman Fund of the Research Corporation, the National Research Council, National Live Stock and Meat Board, the Rockefeller Foundation and such organizations as the E. I. du Pont de Nemours & Company, the Quaker Oats Company, Parke, Davis & Company, and Nestlé. They illustrate the use of biochemical measures for the evaluation of nutritional status, a nutrition survey in an unusual rural population, studies of the effect of environmental factors, including diet on serum cholesterol levels, the effect of infections on nitrogen metabolism, fundamental biochemical investigations into the nature of kwashiorkor and marasmus, and the clinical evaluation of low cost vegetable mixtures of high nutritive value developed for the prevention of protein malnutrition. Because of the clinical nature of this journal the extensive work of INCAP in the area of agricultural and food chemistry is not directly represented.

It has been a great privilege for me to serve as Director of INCAP since its inauguration and now to have the opportunity as guest editor to present a group of eleven papers illustrating some of INCAP's clinical research activities. Investigations of this type carry with them the double stimulus of acquiring new knowledge and contributing directly to the practical solution of the urgent nutrition problems of technically underdeveloped areas. It is hoped that these papers will give an idea of the variety of fundamental problems in the field of clinical and public health nutrition which require further research.

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