MEMORANDUM

To: Members of Tropical Diseases Study Section
From: Frank W. Reynolds, M. D., Executive Assistant
Subject: Annual Study Section Report

Enclosed herewith is a preliminary draft of the annual report of the Tropical Diseases Study Section.

Attention is invited to the fact that the first several paragraphs represent the statement prepared by Dr. Warren and distributed at the time of the last Study Section meeting.

Your comments and suggestions are requested. Since the report in its final form must be ready by June 10, 1948, your prompt consideration of this matter will be greatly appreciated.
ANNUAL STUDY SECTION REPORT

I. Progress in Research Under the Tropical Diseases Study Section Program

A. Overall Progress

In the earlier days of our nation, we fortunately were isolated by two oceans from a large part of the world. Our economy was not dependent, as it is today, on exports. As our agriculture has expanded and our country became more and more industrialized, our economic structure has become dependent on foreign trade. Technological and scientific developments have resulted in rapid transportation both on the sea and in the air. We are no longer isolated politically, economically or physically. We are even less isolated from the standpoint of exotic diseases of the tropics, because such diseases recognize no political, economic or social barriers. Yellow fever in South America and Africa, cholera, plague and dysentery in India and China, and malaria in all the tropical and subtropical countries are of direct consequence to the commerce of our nation and to our national health and welfare.

Prior to World War II, most of the research on tropical diseases was done for us by the British and Germans, and if the results of their research had not been available to us, we should have been in a most desperate situation in prosecuting the recent World War. We would have been without atabrine, without DDT and without the sulfonamide drugs. Neither England nor Germany is now in a position to take the leadership in research on tropical diseases, and it is imperative, therefore, that we do our own studies on the problems of the tropics in order to insure our economic, military and health security. Money spent on research in tropical diseases should be regarded as an investment in the maintenance of our social and economic systems.

Since the inauguration of the Tropical Diseases Study Section, twenty-five research projects have been activated in this field. Studies have been made in 15 states and in two foreign countries (Guatemala and Australia). The projects have been concerned primarily with two important problems, amoebiasis and schistosomiasis; and in these conditions the most significant advances have been made. Amoebiasis is considered to be a problem of immediate practical concern, since this condition is endemic throughout the United States. Schistosomiasis occurs in American dependencies (Puerto Rico) and in areas occupied by American military personnel (Japan). Other studies have been concerned with onchocerciasis, toxoplasmosis, African sleeping sickness and filariasis.

B. Progress in Specific Projects

The highlights of the Tropical Diseases program are considered to be certain significant developments in the diseases amoebiasis, schistosomiasis and onchocerciasis.
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(1)  Amoebiasis.  On January 12, 1948, the Study Section held a panel discussion on amoebiasis.  At this time, progress reports of outstanding developments were made.  The titles of these papers give an excellent indication of the significance of this work:

"Possible Determinants of the Pathogenicity of Entamoeba Histolytica.  A Study of the Bacterial Associates and Their Susceptibility to Antibiotics" — Dr. Feust (RG 43)

"The Antigenic Constitution of Entamoeba Histolytica" — Dr. DeLamater (RG 355)

"Physiological Characteristics of Human Intestinal Amoebae" — Dr. Balamuth (RG 992)

"Amoebiasis: Requirements for Growth and Control of Entamoeba Histolytica in Vitro and in Vivo" — Drs. Johnstone and Hausen (RG 719)

"Some Aspects of Experimental Design in Cultural Studies of the Entoicidic Amoebae" — Dr. Griffin (RG 787)

(2)  Schistosomiasis.  Several groups of workers have been actively engaged in problems relating to the chemotherapy of schistosomiasis.  The work of Welch (RG 334), Beiter and Wright (RG 311) and of DeGraff (RG 360) has resulted in the screening of several hundreds of potentially effective chemotherapeutic agents.  Several new compounds of considerable promise have been developed.

The studies of Meloney (RG 385) on the biology of schistosomiasis are of fundamental importance.  These studies include: comparison of several types of schistosome infections in experimental animals, including suitability of hosts, migration of young worms and histopathology; effects of chemotherapy; serologic studies; and cross infections with various types of schistosomiasis.

(3)  Onchocerciasis.  This disease is an important public health problem in Southern Mexico and parts of Guatemala.  The Pan-American Highway will traverse highly endemic areas of onchocerciasis, and the traffic upon the highway no doubt will influence the dissemination of the disease.  The studies carried on under RG 158 are adding considerably to our knowledge of the pathology, transmission, and control of this condition.

II.  Resume of Study Section Actions on Applications for Research Grants Since Inception of Program on January 1, 1946 to July 1, 1948.

A.  Number of applications considered — 60, Amount $736,620.

B.  Number of applications approved — 46#, Amount: $592,438.  (77%).

(#) Represents 25 projects
III. Research Objectives

There is urgent need to expand studies currently going on to include others in such subjects as: Tropical physiology and nutrition; other parasitological diseases such as trypanosomiasis; tropical diseases of virus and rickettsial origin such as scrub typhus and the various encephalitides; diseases of bacterial origin such as plague, cholera and diarrheas and dysenteries. Research is also needed on insecticides, larvacides and repellents.

A. Immediate aims and estimate of financial needs for the period July 1, 1949 to July 1, 1950.

The immediate aims of the Tropical Diseases Study Section are to carry through to completion the current projects, and to stimulate new projects along the lines indicated above. For the fiscal year 1950, an extremely conservative estimate of funds needed would be $330,000. Of this, approximately $288,000 would be for continuation of studies now being conducted, and $42,000 for new projects.

B. Long range objectives and estimate of financial needs for the five year period: July 1, 1949 to July 1, 1954.

It is anticipated that the program of the Tropical Diseases Study Section will be a gradually expanding one. The number of laboratories equipped to study certain of the tropical diseases is limited, but it is sincerely to be hoped that other groups will become interested in this field.

A reasonable estimate of the financial requirements for the five year period July 1, 1949 to July 1, 1954 would be as follows:

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<th>Period</th>
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