



directing council

PAN AMERICAN
HEALTH
ORGANIZATION

XIV Meeting

Washington, D. C.
September 1963

regional committee

WORLD
HEALTH
ORGANIZATION

XV Meeting



Draft Agenda Item 21

CD14/18 (Eng.)
12 August 1963
ORIGINAL: ENGLISH

REPORT ON RESEARCH POLICY AND PROGRAM OF THE PAN AMERICAN HEALTH
ORGANIZATION

In recognition of the purposes of the Pan American Health Organization and of the growing importance of research as an essential component of a comprehensive program for the betterment of health in the Americas, and as instructed by Resolution XXXVIII of the XIII meeting of the Directing Council (Washington, D.C., October 1961) (see Annex I) studies have been undertaken to guide an expanded and intensified research and research training effort aiming at solving health problems for which there are presently inadequate or no available answers. As the program develops it is being related to the distinctive needs and opportunities for research existing within the Governments. It emphasizes research projects requiring coordinated effort by more than one country and research activities that stimulate a wider application of existing and new knowledge to the special health problems of each country. The research policies and programs of PAHO are coordinated with those of WHO, bearing in mind the opportunities, special needs and requirements for research in the Americas.

The XVI Pan American Sanitary Conference approved a research policy and expanded program for PAHO in Resolution XXVI (see Annex II) and requested the Director to take all possible steps to expand the research activities of the Organization, including specific projects and their financing for the mutual benefit of the countries of the Hemisphere.^{1/}

The approved research policy of PAHO is: to assist the Americas in the development of the necessary research resources for the solving of the most pressing health problems of the people.

The current expanded PAHO research program is summarized in Document RES 2/30 (See Annex II) which was reviewed by the PAHO Advisory Committee on Medical Research at its Second Meeting, (17-21 June 1963) (See Annex IV). The Reports of that Meeting and of the First Meeting

^{1/} Director's Report on PAHO Research Policy and Program, Document CSP16/35; XVI Pan American Sanitary Conference.

(18-22 June 1962)^{1/} indicate the range, variety, priorities, and quality of the program (biomedical, bioengineering and biosocial studies), and include specific recommendations for the guidance of the Organization in implementing the policy and the program. The program is financed by research funding agencies grants in the total amount of \$2,377,073 for 36 projects.

This includes a grant from the NIH/USPHS for the operational activities of the Director's Office of Research Coordination for the years 1962 and 1963 to a total of \$213,250. The Office is the Secretariat of the PAHO Advisory Committee on Medical Research, and exercises continuing review of the Organization's research policy and program.

In general the Organization's program is concerned with three broad areas of research which bear directly on the health and well being of the people of the Americas. These are:

- (1) Biomedical research on certain communicable and other diseases and malnutrition about which knowledge to bring about their control is deficient or non-existent;
- (2) applied and basic research in environmental health (bio-engineering) having to do especially with sanitation, pure water supply, waste disposal, industrial health and housing problems, and air and stream pollution; and
- (3) biosocial and biostatistical research dealing with health conditions and the economics and social anthropology of health and medical care including administrative research to improve health services and medical care programs.

The bulk of the current research program is concerned with biomedical and biostatistical problems. Activity in the fields of environmental health and biosocial and administrative studies is accelerating and should expand greatly in the future if health progress is to achieve the targets laid down in the Charter of Punta del Este for the decade of the 1960's.

The Task Force on Health at the Ministerial Level (15-20 April 1963) took note of the importance of research, stating that, "Any systematic program for health progress in the Alliance for Progress must rely heavily on improved knowledge of the life sciences, and biomedical, engineering and social research is needed to provide the necessary knowledge." It noted, too, that "it is important that research in the biomedical, bioengineering, and biosocial fields be closely coordinated with operational and information requirements of health services, health planning agencies, and the institutions engaged in the education and

^{1/} Report of the First Meeting, 1962 - Document RES 1/19

training of health personnel." It said also that "Research is needed to develop better methods of acquiring necessary health information data, their processing, analysis and use in administration of all health programs."

In a series of important recommendations the Task Force suggested that Member Governments assess their research and research training resources and accelerate their research and research training activities towards the solution of problems of the social order of high priority under national plans and the Charter of Punta del Este. All such programs, it recommended, should be planned with attention to the operational requirements of health services, planning units, and the institutions engaged in the education and training of health personnel, and that programs to assure rapid dissemination of research information should be developed.^{1/}

Finally, it is evident that the work of planning and coordination is a continuing process and the Organization established the Office of Research Coordination with this fact in mind. The foregoing report and its annexes indicate the considerable momentum that has been achieved and something of the challenge posed to the Organization and Member Countries if health progress through intensified research and research training is to contribute to a rising standard of living and a healthier life for the people of the Americas in the decade ahead.

It is clear that if the Organization is to be of continuing assistance to the Governments in research and training activities and is to maintain the present momentum provision for such services must be incorporated in the regular budget of the Organization.

Annexes: I, II, III and IV.

^{1/} Final Report of the Task Force on Health at the Ministerial Level - Document TFH/14, Rev. 1, pages 72-73-97-98.

RESOLUTION XXXVIII

PLANNING FOR THE RESEARCH PROGRAM OF THE PAN AMERICAN
HEALTH ORGANIZATION

THE DIRECTING COUNCIL,

Having examined the report of the Director on planning for the research program of the Pan American Health Organization (Documents CD13/15 and CE43/16), and the steps already being taken for the expansion of research in the Region; and

Considering that such expansion of research will be of benefit to the health and medical programs throughout the Americas,

RESOLVES:

1. To approve the plan and policies proposed by the Director of the Bureau in Document CE43/16 in connection with the research program of the Pan American Health Organization.

2. To request the Director to take the necessary action to further intensify the research activities of PAHO for the benefit of the countries of the Region.

(Approved at the sixteenth plenary session,
13 October 1961)

RESOLVES:

1. To express its satisfaction with the research policy and program as presented and, in the words of the Advisory Committee, "congratulates the Director, the Secretariat, Staff and the many experts involved for the very high standards of scientific excellence attained."

2. To express the importance of research training.

3. To request the Director: (a) to take all possible steps to expand the research activities of the Organization, including specific projects and their financing, for the mutual benefit of the countries of the Region and (b) to submit annual reports to the Directing Council and a progress report to the XVII Pan American Sanitary Conference.

(Approved at the eighth plenary session,
1 September 1962)

RESOLUTION XXVI

RESEARCH POLICY AND PROGRAM OF THE
PAN AMERICAN HEALTH ORGANIZATION

THE XVI PAN AMERICAN SANITARY CONFERENCE,

Having considered the report of the Director on PAHO Research
Policy and Programs (Document CSP16/35);

Bearing in mind resolution XXXVIII of the XIII Meeting of the
Directing Council;

Having regard to the present health problems highlighted in the
Charter of Punta del Este, the solution of which will be expedited by
the implementation of the recommended research policy and program;

Noting that an important research training program is called for;

Noting that the Governments through their national research
councils or other appropriate bodies are recommended to assess national
biomedical and public health research resources; and

Considering the importance of research in the program of
the Organization,

CURRENT PAHO RESEARCH ACTIVITIES

Ref: RES 2/30
3 June 1963

**PAN AMERICAN HEALTH
ORGANIZATION**

**ADVISORY COMMITTEE
ON MEDICAL RESEARCH**

SECOND MEETING

**17-21 June 1963
Washington, D.C.**

CURRENT PAHO RESEARCH ACTIVITIES

Ref: RES 2/30

3 June 1963

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION

WASHINGTON, D.C.

REVIEW OF PAHO RESEARCH ACTIVITIES DURING 1962*

At this Second Meeting of the PAHO/ACMR, we believe it would be appropriate to recall the steps that led the Pan American Health Organization to embark upon an expanded program for medical research in the Americas, to restate the general objectives that have guided the Office of Research Coordination in developing this program and to describe its *modus operandi*.

Cognizant of the importance of research as an essential component of a comprehensive program for the improvement of health in the Americas, the Organization requested and obtained in 1961 from the National Institutes of Health/USPHS, a research planning grant which made possible the bringing together under the newly created Office of Research Coordination the various research components of the regular PAHO programs as well as entrusting to the new office the task of developing and implementing an expanded research program for the Organization.

The PAHO intensified program is primarily concerned with:

1. Research in fields related to the program effort of PAHO;
2. The solution of research problems which are better resolved by multi-country cooperative endeavors;
3. Stimulating and supplementing rather than replacing national efforts or the activities of other international or national organizations and philanthropic institutions in the field; and
4. Accelerating the development of bio-medical research in the Americas by promoting the training of research workers.

*Prepared for the Second Meeting of the PAHO Advisory Committee on Medical Research, 17-21 1963, by the Deputy Chief, Office of Research Coordination, PASB.

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To carry out these objectives, the following fields were identified in the preliminary phase of the program as requiring evaluation of needs and opportunities for research: research training, environmental health, dental health, maternal and child health, nutrition, Chagas' disease, malaria, schistosomiasis, leprosy, plague, arthropod-borne virus diseases, zoonoses, radiation and isotopes, health economics and medical care.

To review and appraise the research potential of those fields, 50 consultants and 25 staff members were utilized in order to:

1. Assess the present state of knowledge;
2. Define the main problems;
3. Indicate the research needed to solve these problems;
4. Summarize the relevant research currently underway, particularly the research being carried out in the Western Hemisphere;
5. Identify the research most likely to produce fruitful results through international cooperation;
6. Assess the resources available in terms of materiel and trained personnel in the centers where research can best be carried out;
7. Indicate the magnitude and priorities of the financial, materiel and manpower investments needed for the research;
8. Recommend supplementary research support, if needed.

In the selection of consultants, an effort is made to appoint individuals who: a) are actively engaged in research in the field for which their advice is sought; and b) are knowledgeable both in the Latin American research community and in the possible sources of research support.

To evaluate the resources and formulate research proposals in

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connection with items 5, 6, 7 and 8 above, the consultants make site visits to institutions and laboratories where active research programs in the fields under review are known to exist.

In 1962, the recommendations and conclusions following the site visits by the consultants were presented to the PAHO/ACMR at its first meeting for the Committee's evaluation and review and for the ascribing of priorities. After studying these reports the Committee recommended to the Director of PAHO the fields of research that the Organization could profitably cultivate during the initial stage of its research program. Document RES 1/19, incorporating the Committee's report and a summary of the reports of the consultants, was submitted to NIH as a progress report of the research grant and as supportive data accompanying the request for an extension of the grant for one additional and terminal year. This document also served as the basis for the Director's report on the PAHO Research Program presented to the XVI Meeting of the Pan American Sanitary Conference in Minneapolis in September, 1962. The resolution of the Conference approving the program paved the way for including in the 1964 operating budget of PAHO the funds needed to finance the activities of the Office of Research Coordination, thus assuring continuity of the PAHO research program.

During the 12 months since the last meeting of the PAHO/ACMR major emphasis has been given to implementing the Committee's recommendations. In the course of this week's meeting, progress reports on current research will be made for those items of the research program which the Committee considered at the last meeting. These will be covered by the first four items of the agenda. The report of the Advisory Group on Research in

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Zoonoses heads the list of new activities, beginning with item five, and surveys research needs and opportunities in this field following an extensive visit by the Consultants in June - August 1962 to Argentina, Brazil, Chile, Colombia, Guatemala, Mexico, Panama, Peru, Uruguay and Venezuela.

To comply with the request of the Committee that at this session it "would welcome proposals for research on respiratory virus diseases which are suspected to contribute largely to mortality and morbidity in Latin America", two consultants were appointed to appraise prospects for investigations in this field. Their observations and conclusions following site visits in Mexico, Costa Rica, Panama, Venezuela, Brazil, Uruguay, Argentina and Chile appear in document RES 2/2 to be presented by Dr. Maurice R. Hilleman.

A PAHO Scientific Group on Research in Endemic Goiter was convened this April in Caracas, Venezuela, at the Instituto Venezolano de Investigaciones Cientificas to explore in detail the kinds of scientific studies which would be most profitable to undertake with the personnel and resources that are or could become available in Latin America. The report of this meeting, which includes an outline of proposed investigations by the participants, will be presented by Dr. John Stanbury as document RES 2/20.

The reports of two planning conferences on research on congenital malformation (RES 2/3) and on epidemiological research on cancer (RES 2/7) will be reported by Dr. Ruth R. Puffer and Miss Mary Burke, respectively.

Item 6 of the agenda starts a precedent which it is hoped will be maintained in subsequent meetings of the Committee, namely, to devote

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a full day to an evaluation in depth of research needs in a single field of inquiry. The topic selected for this meeting is tuberculosis and we are indebted to Drs. McDermott and Dubos for accepting the responsibility of organizing the scientific sessions and suggesting the panel of discussants.

In conjunction with the meetings of the 7th International Congresses of Tropical Medicine and Malaria and the 8th International Congress of Leprology in Rio de Janeiro next September, PAHO is convening five one-day working groups on research in arbo- and respiratory virus diseases, serology of leprosy and chemotherapy of Chagas' disease, which will bring together the active research workers in these fields to define research problems and their priorities, to determine the willingness of these investigators to participate singly or jointly in the solution of these problems and to explore the role of PAHO in stimulating further investigations.

The table appended to this document attempts to summarize under three headings (new grants, continuation grants and grants under consideration) the main research activities associated with the PAHO research program for the period January 1, 1962 to the present. The data contained therein lists principal investigators and institutions, research subjects, source and magnitude of funds and duration of research projects.

Most of the grants classified as new grants (pages 1-4 in the Table) and as grants under consideration (pages 10-12 in the Table) represent implementation of recommendations by the Committee and by the consultants at the first meeting of the PAHO/ACMR. If the research proposals still

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under consideration by granting agencies are not included, the total funds available to investigators whose research activity was directly stimulated by PAHO and falling within the research program formulated by this Advisory Committee is approximately \$2.4 million for the current year. It is conservatively anticipated that in 1964, the research grant funds will increase to about \$2.8 million assuming that half of the proposals now under consideration will be approved.

ANNEX

RESEARCH GRANT PROPOSALS SUBMITTED
SINCE 1 JANUARY 1962

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I. New Grants	1
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RESEARCH GRANT PROPOSALS SUBMITTED
SINCE 1 JANUARY 1962

PART I
NEW GRANTS
(Nos. 1-12)

RESEARCH GRANT PROPOSALS SUBMITTED

SINCE 1 JANUARY 1962*

I. New Grants

No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Grant Terminati
			Amount; renewal or starting date	Total requested (duration in years)	
1	Dario RESTREPO School of Dentistry University of Antioquia Medellín, Colombia	Salt Fluoridation Study in Four Colom- bian Communities (NIH)	\$83,874 Jan. 1963	\$250,961 (5)	31 Dec. 1967
2	William M. HENDERSON PANAFTOSA Rio de Janeiro, Brazil	A) Epizootiological Survey of Foot-and- mouth Disease on Tie- rra del Fuego B) Study of Survival of Foot-and-mouth Disease Virus in Cured Beef C) Other Activities as Approved (AID)	\$237,000 June 1962	\$237,000 ** (1 1/2)	31 Dec. 1963

* Compiled by the PAHO Office of Research Coordination on 15 June 1963

** Includes \$71,900 for construction and equipment. Extended to 30 June 1964

Research Grant Proposals - Part I (cont'd)

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Page 2

No.	Principal Investigator and Institution	Research Project (and source of fund)	Amount Requested and Grant Period		Date of Grant Termination
			Amount; renewal or starting date	Total requested (duration in years)	
3	Jorge M. VELASCO-ALZAGA PAHO Washington, D.C.	Mental Health Infor- mation Center for Latin America (NIH)	\$36,384 Jan. 1963	\$105,050 (3)	31 Dec. 1965
4	Joaquín CRAVIOTO Moisés BEHAR INCAP Guatemala City, Guatemala	Influence of Nutri- tional Status on Mental Development (AAACC) (MMF) (NF)	\$30,820 Sept. 1962 \$10,000 Nov. 1962 \$10,000 Jan. 1962	\$ 61,640 (2) \$ 20,000 (2) \$ 30,000 ()	Oct. 196 Oct. 196 Dec. 196
5	Leonardo MATA Virginia PIERCE INCAP Guatemala City, Guatemala	Interrelation of Viruses, Diarrhea and Nutrition (NIH)	\$33,607 Oct. 1962	\$ 93,835 (3)	30 Sept. 1965

Research Grant Proposals - Part I (cont'd)

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Page 3

No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Termin- ation
			Amount; renewal or starting date	Total requested (duration in years)	
6	Joginder E. CHOPRA PAHO Trinidad, West Indies	Pathogenesis and Prevention of Anemia in Trinidad (NIH)	\$ 21,713 May 1963	\$ 41,113 (2)	30 Apr. 1964
7	Ramón VILLARREAL PAHO Washington, D.C.	Needs for Physicians in Latin America and Medical Education Programs: Plan- ning Conference (MF)	\$ 29,000 May 1963	\$ 29,000 (6/12)	Oct. 1963
8	Moisés BEHAR INCAP Guatemala City, Guatemala	Development of Elementary School Teaching Materials (nutrition) (KF)	\$ 6,700 Feb. 1962	\$ 20,100 (3)	31 Jan. 1965
9	Ruth R. Puffer PAHO Washington, D.C.	Exogenous Causes of Con- genital Malformations: Plan- ning Conference (NIH)	\$ 19,510 Nov. 1962	\$19,510 (5/12)	31 Mar. 1963

Research Grant Proposals - Part I (cont'd)

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Page 4

No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Termination
			Amount; renewal or starting date	Total requested (duration in years)	
10	A.J. WALKER Psychiatric Service State Health Department Ribeirão Preto, Brazil	Screening Center for Drug- resistant Plasmodia (SMF)	\$ 14,500 Jan. 1963	\$ 14,500 (10/12)	31 Oct. 1963
11	Mary H. BURKE PAHO Washington, D.C.	Epidemiological Research on Cancer in Latin Ame- rica (NIH)	\$ 10,920 Sept. 1962	\$ 10,920 (1)	31 Aug. 1963
12	Nelson CHAVES School of Medicine University of Recife Recife, Brazil	Research on Protein Mal- nutrition in Recife (NRC)	\$ 10,000 May 1962	\$ 10,000 (1)	30 Apr. 1963

Total of 14 new grants \$554,028

\$943,629

RESEARCH GRANT PROPOSALS SUBMITTED
SINCE 1 JANUARY 1962

PART II
CONTINUATION GRANTS
(Nos. 13-36)

RESEARCH GRANT PROPOSALS SUBMITTED
SINCE 1 JANUARY 1962

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II. Continuation Grants

No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount requested and grant period		Date of Termination
			Amount; renewal or starting date	Total requested (duration in years)	
13	Ruth R. PUFFER PAHO Washington, D.C.	Interamerican Investigation of Mortality (NIH)	\$231,358 Jan. 1963	\$630,029 (5)	31 Dec. 1965
14	Moisés BEHAR Guillermo ARROYAVE INCAP Guatemala City, Guatemala	Metabolic Factors in Protein Malnutrition (NIH)	\$ 57,526 Jan. 1963	\$417,150 (7)	31 Dec. 1967
15	Malaria Eradication Branch, PAHO, and the Ministry of Health of El Salvador	Malaria Epidemiology Study Teams (SMF)	\$125,865 Jan. 1963	\$408,038 (3)	
16	Werner ASCOLI Nevin S. SCRIMSHAW INCAP Guatemala City, Guatemala	Interrelations between Diarrhea and Malnutrition (NIH)	\$ 79,274 Feb. 1963	\$389,254 (5)	31 Jan. 1964
17	Malaria Eradication Branch, PAHO, and the Ministry of Health of El Salvador	Insecticide Testing Teams (SMF)	\$159,865 Jan. 1963	\$373,920 (3)	

Research Grant Proposals - Part II (cont'd)

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No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Termination
			Amount; renewal or starting date	Total requested (duration in years)	
18	Malaria Eradication Branch, PAHO, and the Ministries of Health of El Salvador, Mexico, Guatemala, Nicaragua and Costa Rica	Mass Drug Administration Pilot Projects (SMF)	\$298,435 Jan. 1963	\$363,885 (2)	
19	William M. HENDERSON PANAFTOSA Rio de Janeiro, Brazil	Foot-and-Mouth Disease Research (OAS/TCP)	\$315,063 Jan. 1963	\$359,603 (1)	31 Dec. 1963
20	José MENDEZ DE LA VEGA INCAP Guatemala City, Guatemala	Training in Nutritional Sciences (NIH)	\$ 54,250 June 1962	\$273,527 (5)	31 May 1966
21	Carlos TEJADA José MENDEZ INCAP Guatemala City, Guatemala	Relation of Atherosclerosis to Environmental Factors (NIH)	\$ 57,614 Jan. 1963	\$272,337 (9)	31 Dec. 1965
22	George G. GRAHAM British American Hospital Lima, Peru	Infantile Diarrhea and Mal- nutrition in Perú (NIH)	\$ 49,190 Sept. 1962	\$258,984 (5)	31 Aug. 1965

No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Termination
			Amount; renewal or starting date	Total requested (duration in yrs.)	
23	Carlos TEJADA INCAP Guatemala City, Guatemala Henry C. McGILL, Jr. Louisiana State University New Orleans, Louisiana	Atherosclerosis in Latin America (NIH)	\$ 48,300 Oct. 1962	\$241,500 (5)	30 Sept. 1964
24	Guillermo ARROYAVE Adrian JANSEN INCAP Guatemala City, Guatemala	Biochemical Evaluation of Nutritional Status (NIH)	\$ 46,148 Jan. 1963	\$238,283 (5)	31 Dec. 1965
25	Dorothy WILSON Nevin S. SCRIMSHAW INCAP Guatemala City, Guatemala	Infection and Human Nutrition- al Status in the Tropics (NIH)	\$ 44,651 Jan. 1963	\$223,818 (5)	31 Dec. 1965
26	William F. SCHERER Cornell University Medical College New York, New York	Infectious Diseases: Virology, Ornithology, Ecology, Tropical Medicine (NIH)	\$ 31,698 July 1962	\$219,389 (5)	30 June 1967

Research Grant Proposals - Part II (cont'd)

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No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Termi- nation
			Amount; renewal or starting date	Total requested (duration in yrs.)	
27	Ricardo BRESSANI Moisés BEHAR INCAP Guatemala City, Guatemala	Amino Acid Metabolism in Human Subjects (NIH)	\$ 44,523 Jan. 1963	\$215,530 (5)	31 Dec. 1964
28	Abraham HORWITZ PAHO Washington, D.C.	International Research Planning Program (NIH)	\$ 92,500 Jan. 1963	\$213,250 (2)	31 Dec. 1963
29	Ricardo BRESSANI Edgar J. BRAHAM INCAP Guatemala City, Guatemala	Biochemical Research in Agricultural Crops and Industrial By-products (EF)	\$ 25,000 Nov. 1962	\$ 75,000 (3)	31 Oct. 1963
30	John J. KEVANY PAHO Washington, D.C.	Nutrition Research and Training in the National Institute of Nutrition, Ecuador (WWF)	\$ 18,500 Feb. 1961	\$ 60,750 (3)	31 Jan. 1964
31	José MENDEZ DE LA VEGA INCAP Guatemala City, Guatemala	Comparative Biochemical Study in Populations with High and Low Frequencies of Coronary Heart Disease (NF)	\$ 6,000 July 1963	\$ 56,000 (8)	30 Jun. 1965

Research Grant Proposals - Part II (cont'd)

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No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Termination
			Amount; renewal or starting date	Total requested (duration in yrs.)	
32	Department of Health British Guiana	Chloroquinized Salt Program (SMF)	\$ 18,236 Jan. 1963	\$ 36,236 (2)	31 Dec. 1963
33	Guillermo ARROYAVE Nevin S. SCRIMSHAW INCAP Guatemala City, Guatemala	Significance of Diets Low in Animal Protein and Other Nutrients (NF)	\$ 5,000 July 1963	\$ 25,000 (5)	30 June 1965
34	John J. KEVANY PAHO Washington, D.C.	Evaluation of Clinical Signs of Nutritional Status (NIH)	\$ 6,849 June 1962	\$ 21,697 (3)	31 May 1963
35	Benjamin D. BLOOD CEPANZO Azul, Argentina	Studies on Methods of Treating Canine Echino- coccosis (NIH)	\$ 4,600 Dec. 1962	\$ 11,500 (2)	30 Nov. 1963
36	Malaria Eradication Branch, PAHO, and the Ministry of Health of El Salvador	Malathion Studies (SMF)	\$ 2,600 Jan. 1963	\$ 2,600 (1)	31 Dec. 1964

Total of 24 continuation grants . . \$1,823,045

\$5,387,280

RESEARCH GRANT PROPOSALS SUBMITTED
SINCE 1 JANUARY 1962

PART III
GRANT PROPOSALS UNDER CONSIDERATION
(Nos. 37-45)

RESEARCH GRANT PROPOSALS SUBMITTED
SINCE 1 JANUARY 1962

III. Grant Proposals under Consideration

No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Termination
			Amount; renewal or starting date	Total requested (duration in yrs)	
37	Abraham Horwitz PAHO Washington, D.C.	Development of Permanent Institutional Resources for Research Training and Ex- change of Research Person- nel in the Health Sciences in Latin America (AID)	\$294,600 Jan. 1964	\$2,069,000 (4)	31 Dec. 1967
38	Ruth R. PUFFER PAHO Washington, D.C.	Exogenous Causes of Conge- nital Malformations (NIH)	\$234,324 Dec. 1963	\$1,557,068 (5)	30 Nov. 1968
39	Ismael MENA Catholic University of Chile Santiago, Chile George C. COTZIAS Brookhaven National Lab. Upton, L.I., New York Irvin M. LOURIE (Project Coordinator) PAHO Washington, D.C.	Manganese Poisoning: A Metabolic Disorder (NIH)	\$ 40,530 Sept. 1963	\$ 290,370 (5)	31 Aug 1968

Research Grant Proposals - Part III (cont'd)

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No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount requested and grant period		Date of termi- nation
			Amount; renewal or starting date	Total requested (duration in yrs)	
40	Fernando VITTERI INCAP Guatemala City, Guatemala	Influence of Nutritional Status on the Physical Working Capacity (SGO/US Army)	\$ 49,570 July 1963	\$198,497 (4)	30 June 1967
41	G.V. TAPLIN and B. CASSEN University of California Los Angeles, California I. MENA Catholic University Santiago, Chile E.J. GARCIA University of Porto Alegre and L.C. LOBO University of Brazil Brazil I.M. LOURIE PAHO, Washington, D.C.	Liver Disease in South America (NIH)	\$ 81,325 Jan. 1964	\$157,475 (3)	31 Dec. 1966
42	Juan G. GOMEZ N. IVIC Caracas, Venezuela William F. BALDWIN Atomic Energy of Canada, Ltd. Chalk River, Canada	Irradiation Effects on the Biology of Rhodnius Prolixus (NIH)	\$ 35,400 Jan. 1964	\$106,300 (3)	31 Dec. 1966

Research Grant Proposals - Part III (cont'd)

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No.	Principal Investigator and Institution	Research Project (and source of funds)	Amount Requested and Grant Period		Date of Termination
			Amount; renewal or starting date	Total requested (duration in years)	
43	Benjamin D. BLOOD CEPANZO Azul, Argentina	Studies on Methods of Treating Canine Echino- coccosis (NIH)	\$ 10,409 Dec. 1963	\$ 31,243 (3)	30 Nov. 1966
44	John J. KEVANY PAHO Washington, D.C.	Meeting of Investigators on Protein Malnutrition (WWF)	\$ 10,000 Oct. 1963	\$ 10,000 (3/12)	31 Dec. 1963
45	Boris SZYFRES CEPANZO Azul, Argentina	Rapid Whole Blood Test for Brucellosis (NIH)	\$ 500 Nov. 1962	\$ 500 (1)	7 Nov. 1963

Total of 9 proposed grants . . \$756,658

\$4,420,453

PART IV

ABBREVIATIONS

AAACC = American Association for the Aid of Crippled
Children

AID = Agency for International Development

KF = W.K. Kellogg Foundation

MMF = Milbank Memorial Fund

NF = Nutrition Foundation

NIH = National Institutes of Health

NRC = National Research Council, U.S.A.

OAS/TC = Organization of American States/Technical
Cooperation Program

RF = The Rockefeller Foundation

SGC/US Army = Office of the Surgeon General, U.S. Army
Medical Research and Development Command

SMF = PAHO Special Malaria Fund

CD14/18 (Eng.)
ANNEX IV

REPORT TO THE DIRECTOR

Ref: RES 2/33
21 June 1963

**PAN AMERICAN HEALTH
ORGANIZATION**

**ADVISORY COMMITTEE
ON MEDICAL RESEARCH**

SECOND MEETING

**17-21 June 1963
Washington, D.C.**

REPORT TO THE DIRECTOR

Ref: RES 2/33

21 June 1963

PAN AMERICAN HEALTH ORGANIZATION

Pan American Sanitary Bureau, Regional Office of the

WORLD HEALTH ORGANIZATION

WASHINGTON, D.C.

PAHO ADVISORY COMMITTEE ON MEDICAL RESEARCH

Dr. Hernán Alessandri
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PAHO ADVISORY COMMITTEE ON MEDICAL RESEARCH

Report to the Director

1963

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PAHO ADVISORY COMMITTEE ON MEDICAL RESEARCH

Report to the Director

1963

In his opening remarks, Dr. Abraham Horwitz, Director of the Pan American Sanitary Bureau, stated that the Report of the First Meeting of the PAHO Advisory Committee on Medical Research had been presented to the XVI Pan American Sanitary Conference in Minneapolis, in September 1962, and that all the recommendations in the report had been approved by the Conference, thus establishing research as a major item in PAHO policy. He also stated that the Task Force on Health at the Ministerial Level, meeting in Washington on 15-20 April 1963, made recommendations which, when fully implemented, will provide an added impetus to the strengthening of research resources in national development programs in the Americas.

Research Activities of PAHO and of WHO

The Committee heard with interest the review of PAHO's research activities during 1962 and the restatement of the general objectives that have guided the Pan American Health Organization in the development and coordination of these activities.⁽¹⁾ It was gratified to learn of the number and variety of research projects directly stimulated by PAHO and currently operative in the Americas, and noted the substantial support which the PAHO research program received from granting agencies, among which the NIH/USPHS figures most prominently.

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The Committee heard an account of the research activities of WHO in 1962⁽²⁾. The full report summarizing the medical research program of WHO during 1958-62 was made available to the Committee⁽³⁾. The information presented in these reports was impressive both in quality and quantity. A criticism of the WHO program to the effect that insufficient attention appeared to have been paid to environmental factors influencing disease was countered by the statement that in fact this aspect was part of many regular programs of WHO and that further proposals for specific research would result from meetings of experts now in progress or shortly to be convened. Furthermore, many epidemiological research programs are concerned also with man's interaction with his environment.

Comment

The Committee was happy to note that an exceptional degree of coordination has been achieved between the research activities of PAHO and of WHO and that, in effect, they are component parts of a single world-wide program. The emphasis of the PAHO research program is on those fields of primary or even exclusive interest to the Americas. Whenever the subject is of global importance the programs within the Western Hemisphere are admirably coordinated with the world program. The Committee complimented the Director and his staff on the effective way in which this has been achieved.

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Concern was expressed over the disproportion between the broad responsibilities of both Organizations and the limited assets available to them. For instance, the contributions to the WHO Special Fund for Research have been disappointing and made by very few countries, a reflection presumably of governmental policy. Yet the experience of WHO during the 5 years of its expanded research program and of PAHO during a period of at least 2 years has shown that the leading scientists in most countries of the world are not only willing but ready to collaborate in these programs. The Committee remarked that the considered opinion of the world's leading medical scientists did not seem to influence sufficiently the governmental authorities responsible for the allocation of funds. It strongly reiterated the statement in its first report that research was an essential component of development in social, economic, cultural, and scientific fields. It further stressed that investment in research was potentially the most rewarding one that a Government could make for the future of its people.

Research Activities in Latin America
of the NIH/USPHS

The Committee heard with interest the extensive activities of the National Institutes of Health in support of research and research training in Latin America. (4) The objectives of this program are "to advance the status of the health sciences in the United States and thereby the health of the American people through cooperative endeavors with the other countries in health research and research training".

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The establishment of the Overseas Office in Rio de Janeiro, Brazil, has clearly given impetus and direction to this program. It is evident that, in the NIH grants and fellowship program in Latin America as elsewhere, the key note has been excellence. Although this has been criticized on grounds that it does not help those institutions which have not yet attained excellence and which therefore need assistance most, the Committee agreed that the criterion of excellence is the only one that can lead to good research. One of the problems that has not yet been solved is the assurance that young scientists trained for research will find adequately remunerated career opportunities after their training. It is to be hoped that the stimulus of the PAHO research program will lead to a considerable increase in such opportunities. The Committee noted that the NIH was supporting research in Latin America both directly to the investigator and indirectly through the support of the PAHO research program. Agreement was expressed that in general individual grants are best awarded directly by NIH and that research involving several investigators in different countries might best be supported through PAHO. The Committee was gratified to note that these activities of the NIH are making a major contribution towards the increase of the pool of scientific competence in Latin America which, as the Committee has emphasized, is also a primary objective of the PAHO program and a vital need in developing societies.

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Research Training and Medical Education

The subject elicited the greatest interest on the part of the Committee because of its magnitude and fundamental importance in Latin America. (5) It again endorsed fully the general objectives of strengthening research through the upgrading of teaching institutions.

The Committee strongly supported the proposal for the development of Latin American institutional resources for research training. It deemed that such a program would give a vigorous impulse not only to research activities but also to medical education programs by the fuller application of the scientific method and thinking in medical training.

The Committee insisted in including the subject of environmental medicine as part of the planned curriculum of the research training programs, if not as an identified activity, at least as a basic working concept and philosophy. It emphasized the need to obtain teachers for the basic sciences and to create the environment (salaries, adequate work facilities, etc.) which would favor stability for the staff.

The development of ties between Latin American and U. S. institutions is most desirable. They should be of a general flexible nature, based on specific needs and on personal rather than formal relationships.

Doubt was expressed by some of the members of the Committee regarding the effectiveness of seeding a limited number of institutions with research and training funds. In general, however, the

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majority of the Latin American members of the Committee felt that the money spent in the past by such foundations as the Rockefeller has had a tremendous effect in upgrading higher education and scientific research in the Americas, and that this type of program should not only be continued but considerably increased. Although in some cases the results were not sufficient to justify the efforts--because of factors limiting communications with the rest of the scientific community--it was nonetheless felt that in general the gains had been worthwhile. In addition, many changes have taken place over the past ten years in most countries in Latin America which now make the background for the development of science and technology much more favorable.

The project being planned by PAHO with the collaboration of the Milbank Memorial Fund to study the need for physicians in Latin America was considered most important. The methodology to be developed will aid countries in assessing their health manpower requirements and planning their education and training programs accordingly.

The Committee noted that the research activities of the NIH/USPHS are making an effective contribution to many of the PAHO's planned activities in the research area, by supporting the work of research advisory groups, providing research training grants and grants for visiting professors, and especially by supporting research projects. The Committee felt that the standards of excellence required by the USPHS for research activities in non-U. S. institutions should continue to be, as in the past, the same as those applied to U. S. institutions.

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Many members of the Committee believed that one of the most valuable programs of NIH is that which supports, for limited periods, visiting professors to Latin American institutions. Such visits should be planned carefully in accordance with the interests of the visited laboratory and should be of at least six months to one year's duration. Nevertheless, visits of even a few days were deemed useful in providing intellectual stimulation and encouragement, particularly to isolated groups.

The question was brought up of why only 5 out of 235 U. S. fellows, who received grants for research training abroad, chose Latin America as their site of study. A number of factors seems to be responsible for such a situation, among which are the relatively recent rise of first-class research in many countries in Latin America, the unstable conditions in some countries, the ignorance on the part of many U. S. students and scientists of what Latin America has to offer, and the traditional tendency of North Americans to travel to Europe.

Communications

The subject of communication in biomedical research provoked diverse reactions.⁽⁶⁾ On the one hand it was clearly brought out that conventional methods of scientific communication through journals, libraries, and similar media were inadequate in Latin America and that special provisions were required for their upgrading. On the other hand, it was stressed that, by itself, this would provide partial alleviation of only a segment of the vast communication problem in the face of the current flood of new knowledge.

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The Committee noted that WHO has been studying the problem and had embarked on a limited program of collection and distribution of information on research establishments, biomedical scientists and current research interests. A modest extension of this program to disseminate more complete information in selected fields has been planned, but the original objective of establishing an international clearing house of information on the biomedical sciences has been abandoned by WHO as too ambitious for the present.

The Committee felt that the information available to it, particularly as regards the application of modern methods of high speed data processing to scientific communication, was insufficient to enable it to evaluate the situation in depth or to make recommendations regarding the role of PAHO. It therefore advised that the Pan American Health Organization study the problem further from three viewpoints. First, what is being done to solve the general problem of scientific communication; second, what are the immediate needs in Latin America in this area which might be met, at least partially, by more or less conventional methods; and thirdly, how PAHO can most effectively cooperate with WHO in working towards a solution of the problem of world-wide communication in the health field.

With respect to the second recommendation, the Committee recognized that steps are actually being taken but suggested that efforts should be made to coordinate programs in this field. PAHO should provide consultants who would advise on the organization of libraries, on the coordination and expansion of library resources within universities

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and on a national or perhaps a "zonal" scale, on the establishment of microfilm and photocopy services, and possibly a consultant who would evaluate the desirability of supporting journals specializing in up-to-date reviews.

The Committee recommended early action to implement its views and would value a further report on this immensely important subject at its next session.

WHO Reference Serum Bank
for the Americas

A report on the WHO program of serum reference banks, with special mention of the activities and plans of the World Serum Reference Bank at Yale University, was presented. (7) It was noted that this program was in an active process of development and that no fixed pattern of activities had been decided upon, nor indeed deemed desirable. The diversity of uses of serological epidemiology was stressed, ranging from health information supplemental to that collected from more conventional sources to epidemiological studies of communicable, non-communicable and nutritional diseases and of some genetic disorders. It was agreed that although the concept of multipurpose use of the material gathered was valid, the sampling methods used in surveys designed for specific aims must necessarily render them less valid for other purposes demanding different sampling procedures.

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The useful results derived from the geographical sample of a single age group represented by military recruits in the U. S. A. were noted. Such a sample could provide a good way of identifying areas in a country where more intensive studies might be indicated. It was agreed that the proposed extension of this approach to Brazil and eventually to other Latin American countries might be most useful. It was pointed out that, in some countries of Latin America, serological specimens from populations as yet barely contacted by civilization might provide invaluable data in a situation which is rapidly changing. It was also emphasized that one of the major problems facing health authorities today is urbanization and industrialization and that the accompanying changes in disease patterns are ill-defined. Sero-epidemiological studies of such populations might provide useful information.

Reference was made to the proposal for the establishment in the Pan American Zoonoses Center of a bank for animal sera. The Committee considered this proposal to be a valuable extension of the present program.

Radiation and Isotopes

The Committee heard the report on studies of the effects of radiation on living systems and on radiation as a tool for research in medicine and public health.⁽⁸⁾

In general, the Committee supported the various projects in the documents under discussion. In addition to the proposals endorsed last year, the Committee wished to single out for support the study of

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human populations in the high background radiation areas of Brazil. The proposal for the study of the normal and abnormal physiology of melanin granules in the ancient parts of the brain through neutron activation analysis techniques provoked interest. This imaginative project, which takes advantage of a condition commonly occurring in Chile--manganese poisoning-- and which proposes a cooperative study with the Brookhaven National Laboratory in New York, is of particular interest and deserving of special support.

Research in Environmental Health

Since the 1962 meeting of the PAHO Advisory Committee on Medical Research much progress has been made in Latin America in interesting various governmental agencies and universities in joint efforts toward the establishment of sanitary engineering institutes concerned with environmental problems of basic and applied research.⁽⁹⁾ Such institutes are intended to combine in one facility the functions of sanitary engineering education and training, environmental health research, and sanitary laboratory service for national agencies concerned with such problems. In two countries substantial sums of money are now available for developing these institutes. In other countries plans are near crystallization, or substantial interest has been exhibited in their establishment.

The Committee is pleased with these signs of awakening research interest in the environment. Even with the auspicious beginnings just mentioned, it noted issues to be resolved in future years, as follows:

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- (9)
- a. The review sharply indicates the necessity for continued stimulation of the Ministries of Health in strengthening their environmental activities accepted in principle but neglected in fact.
 - b. As early as possible, the responsible areas for research should be expanded beyond the necessary, but limited, adaptation of North American design criteria to Latin American conditions.
 - c. The entire spectrum of environmental adjustment by engineers waits upon research in depth by medical scientists to disclose the realities of the impact of the environment on man. This joint bio-medical-engineering effort may be one of the institutes' major future successes.
 - d. If and when the institutes are established on the university campus, it is anticipated that university faculties will be rapidly forged. Hopefully they should eventually be completely integrated into university departments, so that the multi-disciplinary knowledge of other departments may be utilized to the utmost.
 - e. The recruitment of full-time staff, with teaching and research responsibilities, should be diligently pursued.
 - f. The translation of scientific findings into social benefits should have a research look, directed primarily at administrative practice, political structure and machinery, fiscal policy and improved communications.

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- g. Universal urbanization and industrialization will require a speeding up of environmental research, not only in the more familiar fields of water and sewerage, but in air, water and soil pollution, radiation, industrial poisons, and exotic chemicals in increasing daily use.

PAHO has a major opportunity in its emerging activities to make research contributions of high significance in the environment.

Zoonoses

The Committee heard reports on the activities of the Pan American Foot-and-mouth Disease Center, the Pan American Zoonoses Center, and of the Advisory Group on Research in Zoonoses. (10, 11, 12)

The Committee noted that although foot-and-mouth disease is not a direct human health problem, its immense economic importance to the meat exporting countries of Latin America makes it an indirect threat through its potential effect on their socio-economic development. The work of the Center is concentrated on determining the distribution of the disease and of the virus types, on developing immunization procedures using both inactivated and live-attenuated virus, and on special problems such as the persistence of virus in the lymph nodes in meat and meat products. The Committee was impressed by the high standard of the work in progress and by the advances in the development of live virus vaccine producing a more durable immunity. It noted that there appeared to be good reasons to hope for the successful development of a polyvalent live virus vaccine containing the three strains present in Latin America.

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The Committee was concerned to learn of objections to the Center conducting research on the persistence of virus in meat products on the grounds that this area of research is properly the province of food technologists. In the view of the Committee this serious problem is one which should be tackled by virologists assisted by food technologists and is thus an entirely proper activity for the Center.

The report of the Pan American Zoonoses Center impressed the Committee by the magnitude and diversity of the zoonoses problem in the Americas. The Committee commended the work of the Center but noted that in many instances it has been seriously hampered by lack of staff, funds and facilities. Several research projects have had to be either abandoned or shelved for these reasons. It noted, furthermore, that the training activities of the Center has been severely limited for the same reasons, there being only 12 students trained during 4 years. The Committee learned with concern that the staff of the Center was limited to 4 professionals plus 46 technical and auxiliary staff with a total budget of only about \$200,000. This concern was increased by the report of the Advisory Group on Research in Zoonoses ⁽¹²⁾ which had undertaken an extensive study of the problem of the zoonoses in Latin America and of the potential for their study. An impressive amount of data was collected which adds much weight and importance to the subject. A penetrating analysis of resources revealed many reasons why progress is slow. Many of these reasons are quite similar to those mentioned in the section on research training and therefore should not be repeated here. The report greatly emphasized the urgent need for more leadership,

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scientific guidance and research training. The Committee felt that the Pan American Zoonoses Center is the logical place to satisfy this need, but that it could not do so unless it were given substantially more support than it now has. The Committee recommended that additional support to the Center should be provided as a matter of urgency in view of the high priority of many of the zoonoses research problems. Until this is effected the Committee recommended caution in the initiation of new research projects so as not to endanger the quality of the work of the Center by spreading its limited resources too thinly.

Nutrition

The Committee took cognizance of the report on the activities of the Institute of Nutrition of Central America and Panama (13). It noted with special interest the results of the studies on protein-calorie malnutrition, particularly the efforts of INCAP in determining the why as well the how of the deficiencies through anthropological surveys of food habits.

Interest was expressed in the growth curve of Guatemalan Indians, with its characteristics of early normal growth, followed by a period of relative stagnation -- from age 6 months to 3 years approximately-- and later by a period of growth at a parallel but lower rate than that of children in the U. S. A. Attention was drawn to the similarity of this curve to that obtained for so-called normal mice as compared to those reared in unusually clean environments.

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The studies by INCAP were felt to be of crucial importance for the understanding of nutritional problems in Latin America in their actual social context. They will no doubt provide a good basis for the eventual solution of such problems. The Committee congratulated the Director of INCAP on the excellent work which is being carried out at the Institute. It strongly urged continued support of all phases of INCAP's research program.

In relation to the use of a protein supplement, it was felt by the Committee that one of the chief problems was the distribution of the product to a significant number of people. Even though INCAPARINA is sold in quantities up to 30 metric tons per month, this means that the product reaches only approximately 15,000 people in Guatemala, out of an estimated 3 million affected by protein deficiency. Investigation of the causes -- social, economic and others -- responsible for such limitations would seem to be in order.

The Committee also heard the report on PAHO research activities in nutrition ⁽¹⁴⁾ other than those at INCAP. One of the items in this document is discussed more fully in the report of the Scientific Group on Research in Endemic Goiter ⁽¹⁶⁾. With respect to the preliminary study of the prevalence of vitamin A deficiency, it is believed by the Committee that the data as presented suggest a higher prevalence than had hitherto been suspected, and that further research to define the magnitude and the severity of the problem would be desirable.

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Dental Public Health

At its first meeting the Committee approved a project, subsequently financed by a five-year NIH grant, to study the feasibility of reduction of dental caries through fluoridation of salt in areas where water fluoridation is impracticable. The study will involve four communities, each of about 10,000 persons. Two of the communities will be supplied with a salt mixture - salt with calcium fluoride in one community and salt with sodium fluoride and tricalcium phosphate in the other. A third community will receive fluoridated water while the fourth will receive no added fluoride, thus providing two bases for comparison. The first year of the project is being devoted to establishing base lines through dental examinations and biochemical studies. Fluoridation will be introduced in 1964. If successful, the project should open the way for caries-reduction programs in vast areas of Latin America and elsewhere where public water supplies are either lacking or are too small to make fluoridation of water supplies feasible. The Committee noted with satisfaction the initiation of this important research project. (15)

Endemic Goiter

The Committee congratulated the Consultant on the excellence of his report. (16) It supported fully the way in which the program is being implemented and the various projects as outlined. It recommended in particular that support be given for the projected meeting of the Scientific Group on Research in Endemic Goiter in approximately 18 months time.

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Congenital MalformationsCancer

The Committee heard reports on two planning conferences on research, one on congenital malformations, the other on the epidemiology of cancer. (17,18) The Committee accorded its enthusiastic approval to the proposals contained in both reports. In particular, it emphasized that not only would the programs help solve very important problems, but the way the investigations had been designed would certainly result in greatly improved understanding of many related factors, raise research competence and indicate further studies in related fields. A high priority was given to these proposals.

Maternal and Child Health

In general, the projects under way and in prospect appear to have high total significance from the health standpoint. (19)

In the studies in progress, the emphasis upon malnutrition as the major factor in the diseases of young children is quite understandable because of its major role in child morbidity and mortality in Latin America. It is to be hoped that other significant contributory factors will receive appropriate consideration.

With respect to the proposed studies on health care services, it is suggested that, among other inquiries, the assumed validities of current health supervision programs in pregnancy and in childhood be objectively reviewed.

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The proposals for detailed study of the factors influencing the onset of labor and for strengthening pediatric research in Latin America are obviously of high appeal. Priorities will undoubtedly be required so as to spread to best advantage the limited resources of manpower and money.

Typhoid Vaccine Trials

The Committee was presented with a report on the field studies of typhoid vaccines started in Yugoslavia in 1954 and followed by coordinated trials conducted there and in British Guiana and Poland. (20)

To a very large extent these trials had, from the beginning, been conducted in collaboration with WHO involving the same group of experts. The results showed that two preparations -- one fluid, one dried -- of heat-killed phenol-preserved vaccine conferred significant protection, but that the acetone-killed and dried (AKD) vaccine provided substantially better protection which in children appeared to be over 90%.

However, many problems remained unsolved. No laboratory test has been found to correlate with the field results, apart, perhaps, from the ability of the vaccine to stimulate the formation of H antibodies -- but even here the correlation is not convincing. It is thus not possible at present to measure in the laboratory the probable effectiveness of a given vaccine. Those antibodies which can now be measured have not been shown to be related to protection in man, and it is postulated that other immune mechanisms, such as cellular immunity, may well be more important. It was therefore suggested that research

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towards the development of methods for measuring immunity which are not based on antibody titers should be undertaken. The analogy was drawn to the demonstration of transferrable cellular immunity in tuberculosis.

Such studies will take time, but since it has already been shown that one preparation of AKD is highly effective it was believed that further work on this vaccine should be pressed forward. In the absence of a demonstrably valid laboratory test, doubt as to the probable effectiveness of subsequent batches remained, although in small scale studies using existing laboratory tests, consistent results seemed to be attainable. Quite apart from the successful development of a valid laboratory test, the demonstration that a second batch of this vaccine is effective in man would greatly increase confidence. Measurement of its effectiveness in the field would also provide a second AKD vaccine of known potency for use alongside the remaining samples of the first AKD vaccine in laboratory studies. Furthermore, evidence is already available from field trials that typhoid vaccine might be effective in one dose, a finding which, if confirmed, would be of great public health importance. The Committee therefore recommended that further field studies to test these possibilities should be undertaken, in association with laboratory research to develop new ways of estimating potency in the laboratory.

Discussion of possible sites for such studies revealed that both in Chile and in Mexico there is the rare combination of a high incidence of typhoid fever and a high quality of health services. In Chile, in particular, it was learned that although the introduction of

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chloramphenicol had greatly decreased the mortality from typhoid fever, its availability and use had resulted in the abandonment of typhoid vaccination, leading to an increase in morbidity. The Committee therefore urged that the possibility of undertaking field trials in Chile should be explored since they might provide the data needed and stimulate a renewed interest in the prevention of typhoid fever.

Schistosomiasis

The Committee noted that last year's document on schistosomiasis in the Americas has been completed. (21)

Malaria Eradication

The Committee reviewed the progress report on current research activities of the malaria eradication program in Latin America. (22) The Report indicated that although in most areas the eradication program is progressing satisfactorily, in others serious difficulties have arisen for which no solutions are available at present. The development of resistance to synthetic chemicals by both vectors and plasmodia, as well as problems arising from the physical sorption or inactivation of insecticides in the walls of habitations, has necessitated a return to conventional pre-DDT methods of malaria control, such as larvicides, along with the continued use of mass therapy. The use of still partially effective insecticides is being continued.

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In addition, difficult problems have arisen from social factors such as poor administration, inconsistent support, and population movements -- including migrant labor -- all of which have resulted in both failure of local campaigns and in the reintroduction of the infection into areas where the programs appeared to have been successful.

The Committee encouraged in particular the initiation of field tests of the new experimental long-acting prophylactic and therapeutic anti-malarial preparation.

Plague

A report on a site-visit to the active plague focus in the Department of Piura in Northern Peru which had been recommended by the Committee at its last session was noted. It is clear that the situation in this area is one deserving close study because of the contributions it may make to the understanding of plague and because it may lead towards more effective methods of surveillance and control. The feasibility of the proposed program is greatly increased by the interest and promised cooperation of the Peruvian Government. The Committee endorsed the proposed investigation. (23)

Chagas' Disease

The Committee heard the report on research opportunities in the chemotherapy of Chagas' disease, and agreed with the various points as stated. (24) The importance of biochemical studies on T. cruzi was stressed.

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The Committee asked for a review at its next session of the other topics for research mentioned in the 1962 report ⁽²⁵⁾ as follows:

- "a. Perfection and standardization of diagnostic procedures, primarily because of their importance in evaluating the magnitude of the problem.
- b. A broad survey designed to evaluate the true extent and magnitude of the problem.
- c. Ecology of vectors with a view to more radical control.
- d. Chemotherapy, since to date no therapeutic agent has been found to be really effective against this protozoosis.
- e. Prophylaxis, mainly envisaging:
 - perfection of methods of applying insecticides, chiefly designed to discover more economical techniques;
 - discovery of active substances to combat T. cruzi in blood in vitro.
- f. Basic research on correct identification of trypanosomes similar to T. cruzi and on the nutrition, metabolism, and immunological behavior of this parasite.

To the above list of priorities the Committee wished to add research on the pathogenesis of the disease, which was implied in the body of the document (RES 1/15) but not stated explicitly.

The Committee wished particularly to insist on the following:

- a. The establishment of centers responsible for producing and controlling antigens for laboratory diagnosis as a means of furthering research;

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- b. The promotion of centers to maintain strains of trypanosomes under known conditions and facilitating their exchange, also for the purpose of furthering research;
- c. Specifically supporting the centers of excellence already engaged in research on the various aspects of the disease."

Arbovirus Diseases

The Committee approved the choice of the Institute Adolfo Lutz in São Paulo as a regional reference and training center for arboviruses and urged that such a center be established. It supported fully the programs of collaborative research in the Amazon and bordering river basins, as well as the other research programs outlined in the document. (26)

Respiratory Virus Diseases

The Committee heard with interest the report on the present status of respiratory virus diseases research and the prospects for investigations in this field in Latin America. (27) The report made it clear that these diseases are a major problem in the region and present a tremendous opportunity for research since practically nothing is known of the responsible viruses in Latin America. In several countries both interest in respiratory virus research and adequate laboratory facilities were encountered but training in specific techniques and funds for the support of research were lacking. The problem of salaries and part-time scientific appointments was again stressed. The Committee

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recommended that on-the-spot training be given through the appointment of competent virologists for one or two years who would have the responsibility of creating an effective laboratory capable of continuing after completion of the assignment. They would train national scientists and other laboratory personnel in special techniques and in the preparation and testing of laboratory reagents. They would initiate a virological and epidemiological research program designed to define the respiratory virus problem, identify the virus types, determine the incidence and clinical severity of disease due to different viruses in different age groups and identify the control measures, usually immunization, that would be most appropriate to introduce. It was suggested that such research programs be started in several countries. Outside support by reference centers would certainly be needed. The appropriate virus seeds and reference reagents would be made available within the context of the WHO program already under way. It was, however, emphasized that working reagents were not available on a large scale and that for the most part laboratories would have to learn to prepare their own. The importance of developing microtechniques to economize reagents was stressed. The provision of a laboratory manual was recommended and, if a suitable one could be found, it would greatly help not only research in respiratory virus diseases but virus research in general.

The Committee agreed that the proposal was well conceived and would not only serve to strengthen the research resources but also provide answers to important practical problems. It agreed that on-the-spot training had many advantages including that of being more economical.

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The Committee gave a high priority to the initiating of research and training in this important field.

Leprosy

Leprosy is a unique disease offering many opportunities for imaginative research which, if properly approached, may well help in obtaining important insights into disease mechanisms. The neglected immunological aspects of leprosy deserve particular attention. The Committee agreed with the Consultant that research in this field merits much more support than it has hitherto obtained, not only because of its public health importance, but also as an avenue to fundamental biomedical research. (28)

Reevaluation of Research Needs in Tuberculosis

A whole day was devoted to discussion of tuberculosis research and the opportunities in Latin America for investigation in this field. (29)

The discussion focused on three areas: chemotherapy, vaccination and nutrition.

Chemotherapy and Chemoprophylaxis

The role of drugs in public health programs was the main object of the deliberations. Omitted from the discussions were purely technical questions and individual treatment regimes. Initially only isoniazid (INH), streptomycin (SM) and para-amino-salicylic acid (PAS) were considered, but later thio-semi-carbazone (TB-1) was also included due to the renewed interest in its use by European investigators.

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Data were presented demonstrating the efficacy of INH treatment alone--principally after an initial short course of two or three drugs--as well as of intermittent (twice weekly) drug treatment. Pathogenicity of INH-resistant organisms was demonstrated, even though this pathogenicity and other characteristics exhibit great variations from case to case. The frequency, probably in the increase, of originally INH-resistant organisms was shown. The indication of chemoprophylaxis, particularly in uninfected cases, was questioned and it was generally felt that chemoprophylaxis was indicated only in "select danger groups". It seems that more urgent than to work on new types of treatment and prophylaxis is to devise better ways of bringing treatment and prophylaxis to the largest possible number of people. It is necessary to entertain sociological research and planning as a prerequisite for the technical operation of our knowledge.

It was felt that Latin America offers excellent and unique opportunities to study some of these problems, since it has a high, often increasing, incidence of tuberculosis, good laboratories and capable scientists in its medical research centers.

Vaccination

It was demonstrated that at present the material used for vaccination against tuberculosis is poorly, if at all, standardized, and that the primary need is to remedy this situation. This should not pose too difficult a problem in the case of the living BCG vaccine, since most of the fundamental work is done, but it requires international

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cooperation and epidemiological studies. In the case of killed vaccines more theoretical background work has to be undertaken.

There seemed not to be any disagreement that research in, and more practical use of, BCG is indicated, but it became clear that one of the main problems, if not the main problem, is again a sociological one, that is, to get a significant number of people vaccinated.

The peculiar problem of a relatively ineffective immunization by BCG in tropical countries was presented. The feasibility of BCG vaccination without previous tuberculin testing needs further clarification, as well as the efficacy of oral BCG vaccination.

Certainly, trials with killed vaccine, which had shown promising but not conclusive results in the past, should be repeated.

Again, Latin America, with a high tuberculosis rate and reasonably well developed public health facilities, offers excellent opportunities for carrying out all these studies.

Nutrition

The relationship, not necessarily constituting cause and effect but perhaps a parallelism, between tuberculosis and malnutrition is evident. In tuberculosis, as in other infections, increased nitrogen excretion and consequently negative nitrogen balance accompanies the disease.

Of the vitamins implicated in one way or another in the pathogenesis of tuberculosis, pyridoxine is the most interesting subject for investigation, due to its function as a coenzyme in many metabolic processes, to its role together with pantothenic acid in immunological

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mechanisms and to its antagonism to INH. It is still not entirely clear whether this antagonism also extends to the therapeutic effect of INH.

It was felt that poor nutrition probably has no relationship to the ease with which an infection is established, but that it might decrease the ability to overcome it. Studies in Madras, however, seemed to indicate that neither improvement nor the relapse rate of tuberculosis was influenced by very poor nutrition. It was questioned if the efficacy of BCG vaccination could be impaired by poor nutritional status.

Suggestions for research in Latin America

1. Incidence of disease caused by originally INH-resistant organisms and definition of the characteristics of the various forms of these organisms.
2. Trial with once weekly intermittent drug therapy.
3. Chemoprophylaxis in "select danger groups".
4. Comparison of INH+TB-1 and INH+PAS regimes.
5. Trial with intensive INH+SM for 8-9 weeks (?), then intermittent INH alone.
6. Comparison of INH and INH plus pyridoxine regimes.
7. Comparison of the efficacy of treatment and vaccination centers versus visits to villages and houses.
8. Comparison of BCG vaccination in non-tropical and tropical areas.

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9. Long-term, well controlled study of BCG vaccination without prior tuberculin testing.
10. Comparison of oral against parenteral BCG.
11. Influence of better nutrition on efficacy of BCG vaccination.

Inter-American Investigation of Mortality

The Committee noted with satisfaction the progress accomplished in this field and manifested interest in the results of the study. ⁽³⁰⁾ It felt that the importance of this study goes beyond the mere recording of data. It stimulates interest in accurate observation, provides well authenticated basic data, and should lead to the upgrading of medical practice in the community.

Mental Health

The Committee considered the document on mental health ⁽³¹⁾ and noted that a Mental Health Information Center for Latin America was established in PAHO on January 1, 1963, following a contractual agreement with the NIH/USPHS. Despite the brevity of its existence, this Center has already been exceedingly productive in the preparation of a number of surveys, and in the establishment of programs of communication. An additional area of interest, the promotion of research, is anticipated for the future.

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In the survey area, the Information Center is assembling directories of a) mental health facilities and institutions, and b) professional and non-professional personnel in the mental health field, with whom the information collected by the Center will be exchanged. In addition, an impressive amount of demographic and sociological data have been assembled and given statistical compilation in tables of morbidity and mortality relating to mental disorders in Latin America.

In the area of communication, a preliminary bibliography of the Latin American literature on mental health, for 1948-62, has already been completed and a more selective annotated bibliography for 1957-62 is in preparation. In addition, programs of oral communication have been initiated through field trips, conferences and seminars.

In its third area of interest, the Information Center expects to serve in the promotion and development of research relating to mental health in Latin America.

A number of areas of research of obvious interest and significance suggest themselves.

1. Strong laboratory programs relating brain function and behavior are already under way in Mexico City, Montevideo, Santiago, Caracas and Lima. Their outstanding contributions to knowledge of sensory function, states of consciousness, neural plasticity and learning, merit all possible encouragement and support.

2. Pharmacology generally has been enriched by many vegetable products of Latin America, but in the subdivision of psycho-pharmacology, the development of patterns of addiction of major dimensions provide need

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and opportunities for research. In the Andean Indian culture, addiction to coca and in the Amazon Indian culture, addiction of an hallucigen, yagé, suggest themselves as important subjects for research.

3. More generally, the broad spectrum of socio-anthropological studies of Indian acculturation can be recommended for investigation, including mental health problems associated with adaptation to contemporary industrialization and urbanization.

4. A number of more focal research opportunities exist:

- a. to study the advanced psycho-motor capacity of newborn Mayan babies in Guatemala which is followed by retardation of their development associated with malnutrition after weaning from breast feeding⁽¹³⁾;
- b. to study patterns of aggressive behavior and the factors promoting them in such areas of Latin America as Colombia in which the homicide rate is exceedingly high; and
- c. to study the schizophrenic-like symptoms and the extra-pyramidal system disorders associated with manganese poisoning in Chile.⁽⁸⁾

Research in Medical Care

The Committee wished to reemphasize the statement it made at its last meeting regarding the importance of research in medical care. It recognized the complexity of such research and believed that the two initial directions intended as a basis for the formulation of a

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general policy on the matter are soundly chosen.⁽³²⁾ The Committee felt that the comparative study of medical care in Latin America would, after a careful examination of the standards prevalent in each country, provide means of advising each government in finding solutions to its medical care problems. The Committee also supported fully the idea of studying and bringing to fruition the plan for a Research and Demonstration Center of Integrated Health Care. The theory and practice of the methodology required to bring about proper attitudes in planning would be taught in such a Center. It is hoped that this would lead to the improvement of medical care services by standardizing medical care practices in the various countries and by a better use of the existing facilities within each country.

Systems of Health-Medical Services

The aim of the research proposal for studying systems of health-medical services⁽³³⁾ is to alter the organized framework of such services for an experimental group in the city of Bogotá, Colombia, by providing preventive and curative services to an urban, medically indigent population primarily through general practitioners. Physicians would assume continuous responsibility for their patients on a family basis and would maintain a continuing relationship with all the services that the patients need. Control populations would be studied simultaneously.

It was recognized that applied research of this nature may encounter many difficulties in its practical development and that its results will not be directly applicable to other countries. The

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Committee, cognizant of the importance of the study, could nevertheless, foresee immediate and long-range returns, particularly at a time when there is a wide interest in the rational planning of all aspects of health care as part of social and economic development in the Hemisphere.

Economics of Health and Medical Care

The projects described are both limited in number and modest in character, considering the long-term implications of the subject. ⁽³⁴⁾

It is clear, however, even in the few undertakings so far embarked upon, that the studies are largely directed toward describing existing practices. Public and private efforts should consider newer approaches on both administrative and fiscal fronts.

Analyses of innovations in and departures from traditional practices, where they exist, and initiation of experimental approaches in the whole field of medical care are indicated. Present efforts have not been successful enough to recommend them as satisfactory solutions.

Role of the PAHO/ACMR

A session was devoted to an examination of the role of the Committee and to a discussion to determine the future trends of its activities.

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As an introduction to the session, the Director of PASB reviewed the general objectives of PAHO and stated that research has a definite and most important place within the framework of the Organization's programs for the improvement of health in the Americas and that the Committee could take as background for its work the Charter of Punta del Este wherein one of the purposes of the Charter is "to intensify scientific research and apply its results more fully and effectively to the prevention and cure of illness".

The Committee then reaffirmed as still valid the statement of its main responsibility, made at the 1962 meeting, namely that it would deal with research and with related areas such as research training and education but not "with the application of existing knowledge even when, as is often the case, the gap between knowledge and application is great. This should be the concern of other bodies."⁽²⁵⁾ Divergent opinions were expressed during the discussion on the latter part of this statement.

For many of the health problems in the Americas, it was felt that the most urgent and immediate need is not new knowledge, but a more efficient application of existing knowledge, or the development of new methods better fitted to the special ecological circumstances of the area under consideration. While the latter - the development of new methods - may well be considered under the heading of research, the Committee still holds that the former - the application of existing knowledge - does not fall under its terms of reference, except insofar as the lack of application may be due, as is often the case, to socio-economic and political factors amenable to research. In fact, the point

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was made that the application of knowledge depends less upon the existence of such knowledge than on the community's receptivity, the ingredients of which consist of a whole gamut of cultural patterns including general and social education, rather than health education alone. Thus the application of medical knowledge is dependent more upon the socio-economic progress of the community than on the findings of medical scientists.

The Committee emphasized the importance of insisting upon research into such items as the mechanisms and psychological conditioning of administrative and fiscal policies, that is to say, into the factors affecting the transfer of knowledge from the laboratory bench to the people; and underscored the need for delving into the problems of health education, regarded not as a set of routine audio-visual methods designed to communicate the facts and figures of better health to groups with varying degrees of literacy, but rather as a means of conditioning the reflexes of a community so that it demands better health as part of an improving socio-economic structure. Ignorance is the primary etiological factor of a whole range of diseases.

Probably because of a sense of urgency, the Committee has thus far limited itself mostly to the research problems relating to the immediate health needs of essentially rural communities. It is now becoming aware of the necessity for taking into account the complexity of the broad spectrum of the Latin American community, from the pre-stone age Indian to the sophisticated descendant of the Greco-Roman culture; and from the isolated self dependent farmer to the dweller

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and recent immigrant in the crowded modern cities. With the rapid population growth and increasing industrialization, the tendency is to augment the latter at the expense of the former. The Committee, therefore, believed that in view of the widespread urbanization and industrialization occurring in Latin America it should take cognizance of these developments and address itself in greater depth to such problems as air pollution, traffic accidents and the geographical differences in the incidence of malignancies, among many others. The Committee singled out as suitable sites for investigation in air pollution and traffic problems the cities of São Paulo and Caracas, respectively, and for the study of the relatively high incidence of gastric carcinoma, Cali, Caracas, La Plata, Lima, and São Paulo.⁽³⁰⁾

The diversity and complexity of health problems in Latin America greatly emphasizes the need and relevance of health related research. Latin American scientists are both willing and ready to increase, through basic research, their contributions to the body of existing knowledge. The Committee urged that the research centers that have demonstrated competence in fundamental areas of science be strongly supported.

The third meeting of the PAHO Advisory Committee on Medical Research was scheduled for 15-19 June 1964.

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30. Inter-American Investigation of Mortality (RES 2/8)
31. Research in Mental Health in Latin America (RES 2/22)
32. Research in Medical Care (RES 2/23)
33. A Research Plan for Studying Systems of Health-Medical Services (RES 2/17)
34. Research on the Economics of Health and Medical Care in Latin America (RES 2/13)