

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

Dacca, East Pakistan.

March 8-9, 1967.

7²

Sixth Meeting of the

DIRECTING COUNCIL

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

DIRECTING COUNCIL MEETING

8-9, March, 1967.

Chairman : Colonel S. A. Mallick
Director of Health Services
Government of East Pakistan
Dacca.

Pakistan Representative.

Vice-Chairman : Dr. Williard Boynton
Senior Public Health Officer
USAID/Pak
Lahore.

U.S. Representative.

Members : Dr. Robert Cruickshank
Department of Social and
Preventive Medicine,
University of the West Indies,
Mona, Kinston 7
JAMAICA, W.I.
West Indies.

U.K. Representative.

: Mr. David A. Wraight
Deputy Secretary General
SEATO
Bangkok,
Thailand.

SEATO Representative.

: Dr. Robert S. Gordon
Clinical Director
NIAMD
National Institutes of Health
Bethesda, Maryland 20014
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PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

A G E N D A

FOR THE SIXTH MEETING OF THE DIRECTING
COUNCIL MEETING - March 8-9, 1967.

1. Adoption of the Proposed Agenda
 2. Confirmation of the Minutes of the Fifth Meeting
of the Directing Council held on March 9-10, 1966.
 3. Report of the Technical Committee DC 6/1
 4. Director's Administrative Report. DC 6/2
 5. Director's Financial Report. DC 6/3
 6. Review of the Auditor's Report and the
Director's Comments. DC 6/4
 7. Presentation of Appendices to Personnel
Regulations. DC 6/5
 8. Review of CRL Budget Plan for 1967-68 and
determination of the level of the General
Operating Fund contribution. DC 6/6
 9. Utility Report. DC 6/7
 10. Clinical Investigation Committee. DC 6/8
 11. Extension of CRL-GOP Agreement. DC 6/9
 12. Election of Chairman and Vice-Chairman
for the ensuing year. DC 6/10
 13. Selection of dates for the 7th Meeting of
the Directing Council. DC 6/11
 14. Other items of Business. DC 6/12
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PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY
DACCA, EAST PAKISTAN

Minutes of the 5th Meeting of the Directing Council

The 5th Meeting of the Directing Council of the Pakistan-SEATO Cholera Research Laboratory was held in Dacca on 9 and 10 March, 1966.

The designated members of the Council were:

Dr. Ralph E. Knutti Chairman	Executive Officer, Universities Associated for Research and Education in Pathology Bethesda, Maryland. Representing the Director of the National Institutes of Health.
Colonel S. A. Mallick Vice Chairman	Director of Health Services Government of East Pakistan Eden Buildings, Dacca. Representing the Government of East Pakistan.
Mr. David A. Wraight	Deputy Secretary-General South East Asia Treaty Organization Bangkok, Thailand. Representing the Secretary-General of SEATO.
Dr. D. J. M. MacKenzie	Permanent Representative of the Government of the United Kingdom.
Dr. Willard Boynton	Senior Public Health Officer, US/AID Pakistan, Karachi. Representative of the United States of America.
Dr. R. A. Phillips Secretary	Director, Pakistan-SEATO Cholera Research Laboratory

Others attending the Meeting as official observers from
SEATO Countries:

Mr. Frank Biesel	Consul for the Republic of France, East Pakistan.
Dr. Chom Dhebyasuvaru	Ministry of Public Health Department of Disease Control Bangkok, Thailand.

Others attending portions of the Meeting:

Pakistan-SEATO Cholera Research Laboratory Consultants:

Brigadier M. S. Haque	Director General of Health Services Government of Pakistan.
Dr. K. A. Monsur	Director of Institute of Public Health, Dacca.
Dr. Jean F. Rogier	Chief, Public Health US/AID, Dacca.
Dr. A.K.M. Abdul Wahed	Chairman, East Pakistan Medical Research Advisory Board.

Members of the staff of Pakistan-SEATO Cholera Research Laboratory.

The Meeting was called to order by the Chairman at 0915. In his introductory remarks the Chairman expressed and the Directing Council confirmed pleasure in the appointment of Dr. R. A. Phillips as Director of the Pakistan-Serato Cholera Research Laboratory.

Item 1: Adoption of the Proposed Agenda.

The proposed agenda was presented and adopted.

Item 2: Confirmation of the Minutes of the 4th Meeting of the Directing Council held on 18 and 19 January 1965.

The Minutes were reviewed and approved.

(At this time a coffee break was held during which the USIS photographer took pictures of the group visiting various laboratories.)

Item 3: The Report of the Technical Committee, D.C. 5/1.

The Directing Council, having considered in detail the report of the Technical Committee, adopted the report of the Committee and fully endorsed its recommendations. The Council noted the urgent need for additional facilities, particularly for a dependable and adequate supply of electricity and for a steam generating plant.

In discussion of other items in the report, the Council paid particular attention to the item concerned with teaching and coordination with Public Health programs and noted the assurance of the Director that he will make available research facilities as may be required in implementing the recommendations of the Technical Committee relevant to this report.

It also urged the Director to cooperate with any reasonable plan for the control of endemic and epidemic cholera in this area. To that end, the Directing Council noted that that portion of the Agreement between US/AID and the Government of Pakistan pertaining to the appointment of a Coordinating Committee had not been implemented and urged strongly that the Director take steps to secure the appointment of such a Committee by the Government of Pakistan.

The Council is impressed by the excellence of the Laboratory's main mission - cholera vaccine trials - and agrees with the Technical Committee that other vaccines should be evaluated in an attempt to obtain a better one. Further, that evaluation of toxoids or anti-toxins should be undertaken when such are available.

The Council expressed its appreciation of the comprehensive approach of the Technical Committee in its evaluation of the scientific work in progress and of the guidance the Committee affords for future studies.

Item 4: Director's Administrative Report - D.C. 5/2.

The Council accepted the report as submitted.

Item 5: Review of the Auditors' Report with the Director's comments and the Director's Financial Report. D.C. 5/3 and D.C. 5/4.

Following a review of the Auditors' Report with the Director's comments, the report was accepted. The Directing Council continues to be impressed by the complicated budgeting for the laboratory which is a result of its various sources of support. In consequence of this

the review of the Financial Report was fairly lengthy. The Director was urged to circularise members of the Council with the Auditors' Report, the Budget presentation and other pertinent agenda items well in advance of future meetings. It was further recommended that three copies of the Financial Statement with copies of the agenda be submitted simultaneously to SEATO for information purposes.

The Director of the Laboratory called to the attention of the Council the fact that no provision has been made in the proposed budget for increased construction and improvement of utilities which would necessarily have to be prepared as a supplementary budget.

Following discussion the Council unanimously passed the following resolution:

"The Directing Council, having inspected the Pakistan-SEATO Cholera Research Laboratory facilities, recognises the urgent need to provide more space for clinical research facilities, including ward space. It is hoped that this will be done at the earliest possible opportunity. The Director is urged to prepare a project application to be submitted to an appropriate agency requesting funds for the building of an additional wing of three stories to be situated adjacent to the present building."

The Council accepted the Reports.

Item 6: Presentation of Appendices to Personnel Regulations - D.C.5/5.

In accordance with previous recommendations by the Directing Council the Director outlined certain changes in the personnel regulations. These were formally approved by the Council.

Item 7: Review of CRL Budget Plan for 1966-67 and determination of the level of the General Operating Fund Contribution - D.C. 5/6.

After review of the FY 67 budget proposal, the Directing Council, **noting that the increase in the budget was less than ten percent** of the FY 66 budget, and in accordance with previous actions, concurred in the proposal subject to a review by the respective Governments.

The British representative asked the Directing Council to note that the grant-in-aid made by the British Government had been for a period of 3 years ending 31 March, 1967. He was to enquire if the Directing Council wished this support to be continued. The Directing Council noted its appreciation of this support from the British Government and expressed the hope that this grant-in-aid to the Laboratory would be continued for a further period of three years.

Item 8: Scientific Meeting Attendance Policy.

The Director explained his policy regarding attendance at scientific meetings and for on-site training. The Directing Council expressed full confidence in his views and reaffirmed the importance of scientific staff attending scientific meetings abroad.

Item 9: Clinical Investigation Committee.

The Directing Council urges the Director to give immediate consideration to the formation, in consultation with the Technical Committee, of a review body whose function it will be to assess the protocol of any study or group of studies which involves human experimentation.

Item 10: Representation Policy.

The Directing Council notes and agrees with the Director's proposal to include a sum in future budgets for the purpose of representation by the Pakistan-SEATO Cholera Research Laboratory.

Item 11: CRL-GOP Agreement.

The attention of the Council was invited to the termination date of the current Agreement of 30 June 1967. As a result of the discussion of this item, the Council passed the following resolution:

"The Directing Council is convinced of the importance of past and proposed Laboratory investigations and feeling strongly that these should be continued, therefore authorises the Director to proceed with the negotiations for extension of the Agreement for a further period of three years."

Item 12: Status of Duty Free entry of equipment, supplies, and personal effects of non-Pakistani staff and their dependents.

The Director informed the Council that whereas in the past no problems have arisen on subject item, however he was requested by American Government authorities to inform the Council that there is the possibility of change on the part of Government of Pakistan policy in this regard. At the present time the Government of Pakistan is reviewing many privileges of all non-nationals.

The current agreement states in items 5, 6 and 7 on pages 9 and 10 of the 30 December 1961 agreement that the Government of Pakistan will be responsible for customs duty, import taxes, etc. mentioned in subject item. However, at no place in the Agreement is the precise status of non-Pakistani Pakistan-SEATO Cholera Research Laboratory staff defined. The Director recommended that an attempt be made to define the status of non-Pakistani personnel in the new Agreement and that this status should be equal to that of AID professional staff in this geographic area.

In view of the above presentation, the Council requested the Director to take all possible steps to obtain clarification of this subject, not only relating to the terms of the present Agreement but also to ensure that any future Agreement be drawn up in such a way that this problem is met.

Item 13: Government Status for Members of PSCRL Staff.

In discussion of the subject item, the Directing Council, recognizing that problems of this nature come within the purview of the Coordinating Committee, ~~requests~~ this Committee to present a plan whereby this end may be achieved; the plan to be presented to the Directing Council at its next meeting.

Item 14: Other Items of Business:

In discussion concerning the participation of SEATO member nations in the activities of the Laboratory, the Council wishes to submit for the record its recognition of the importance of contributions by member nations (Pakistan, U.K., Australia and U.S.) to date. It is hoped that these amounts can be continued at a level not less than provided previously. It also recommends that an approach be made to other member nations of SEATO through appropriate channels for their participation in the Laboratory. The proposed increased participation is particularly desired in view of the present spread of cholera which in the past year has invaded Afghanistan, Iran, Russia and South Russia.

The Chairman and members of the Directing Council wish to place on record their admiration of the excellence of the scope and scientific advances which have been achieved at the PSCRL during the period of Dr. Benenson's directorship. The contributions have been important not only in the control of cholera in the host country but in other areas throughout the world where this disease constitutes a major health menace.

Item 15: Election of Chairman and Vice Chairman for next year.

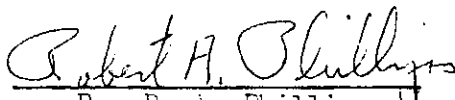
The Council unanimously approved the election of Colonel S. A. Mallick as Chairman and Dr. Willard Boynton as Vice Chairman for the ensuing year.

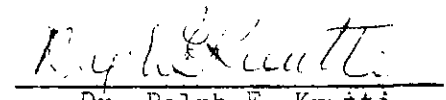
Item 16: Date of next meeting of the Directing Council.

It was agreed that the date for the next meeting would be determined by the Chairman after future consultation with the Director of the Laboratory and the members of the Council.

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The Meeting adjourned at 1300 hours on 10 January 1966.


Dr. R. A. Phillips
Secretary


Dr. Ralph E. Knutti
Chairman

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

REPORT OF THE TECHNICAL COMMITTEE

DC 6/1

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

REPORT OF TECHNICAL COMMITTEE

February 14 - 16, 1967.

The Technical Committee met on February 14 to 16. It was assisted in its review by Dr. Kenneth Goodner and Dr. Alexander Langmuir who acted as consultants. The Committee appreciates greatly their contributions. The Technical Committee wishes also to thank Dr. Robert A. Phillips and his staff for their co-operation in this review, and for their generous hospitality.

In this report we shall deal with recommendations relating to the general operations of the Laboratory as well as recommendations that pertain to the Section.

The Committee first wishes to express its appreciation for the remarkable progress that has been made during the past year. This progress is exemplified by the quality and scope of investigations which have been accomplished or are under way, and by other indicators. For example, during the recent cholera season (September, 1966 through January, 1967) the Laboratory treated 2,225 patients within its meagre hospital resources, with a mortality rate of 0.9%. This admission rate presents a four-fold increase over that anticipated. These statistics are remarkable in themselves but are made more so when it is realised that the supplies of commercially prepared intravenous fluids were grossly inadequate and that the Laboratory was forced to produce 12,000 liters of therapeutic fluids under conditions that would ordinarily be considered as almost totally inadequate. Inadequacies included an undependable power supply, inadequate source of good quality distilled water, a staff untrained in the preparation of fluids for intravenous use, inadequate facilities for washing and sterilisation of glassware and solutions, and no facilities for testing for pyrogenicity. In addition there was gross overcrowding of facilities for patients. The dedication of the whole staff - both laboratory and clinical - was the ingredient that produced such remarkable results under circumstances so adverse.

The Technical Committee is much impressed with the morale of the whole staff. Part of this can be explained by the common "baptism of fire" they had in caring for such a large number of patients during this major outbreak of cholera. While this may be a factor we are more inclined to attribute the high morale to intelligent and imaginative leadership.

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Because of the magnitude of the clinical responsibilities, we believe it is imperative to move as rapidly as possible toward the construction of the new laboratory hospital wing presently under consideration. This will provide 40,000 sq.ft. of space of which 10,000 sq. ft. will be used for patient care. We do not believe it prudent to go through repeated cholera seasons under the present inadequate circumstances, and urge that all steps be taken to construct the new facilities in the shortest possible time.

The Technical Committee wishes to record its admiration for the efforts of the medical and nursing staffs for their remarkable accomplishments during the past cholera season.

Despite the very large patient load the staff was able to continue its investigations. These will not be reviewed in this report except in the broadest terms.

GENERAL RECOMMENDATIONS

1. Epidemic Assistance and Training for Cholera Control.

During the last year the Laboratory has responded to requests from WHO and from CENTO to provide indoctrination and training in cholera control. In addition the Laboratory responded to a request from the Philippines for assistance in the study of an outbreak of cholera.

The Technical Committee believes these to be important functions for the Laboratory to perform and recommends that its staff be augmented as necessary to meet these legitimate demands.

2. Graduate Education and Training.

The Laboratory has reached a high degree of intellectual and technical competence in the study and control of cholera and related diseases. Advantage should be taken of it as a place to train students from Pakistan and other countries. We believe that this competence should be recognised and that less emphasis should be placed on sending students abroad for graduate experience. The desirability of this function for the Laboratory emphasizes the need constantly to upgrade its professional competence and its scientific equipment.

Provision of more senior research personnel on a long-term basis will greatly enhance the Laboratory's potential for research and training. The Technical Committee recommends that provision be made to accomplish this end.

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We are also concerned that the equipment and supplies of the Laboratory should be of first quality so that students who come to it can be trained under the best circumstances. We regret that insufficient attention has been paid to these requirements in the past.

3. The need for a long-term commitment.

The Pakistan-SEATO Cholera Research Laboratory has existed on a short term basis since its founding. The time has come to re-evaluate this concept in the light of the accomplishments of this and other laboratories and in the light of requirements for control and treatment of cholera. Elsewhere in this report projections are made for the need for a ten-year commitment toward the development of an effective vaccine which will give enduring immunity. The Technical Committee recommends that planning be based on a ten-year projection with the option of an additional five to ten years, subject to annual review by the Technical Committee.

We are of the firm opinion that long-term projection of the Laboratory's program is essential to its scientific health and particularly to its ability to recruit and retain high quality scientific personnel.

4. Competence in Bacteriology and Immunology.

The Technical Committee is much concerned with the inadequacies in equipment and supplies necessary for adequate bacteriological diagnosis of cholera and related diseases and for research. Since this competence is central to all other activities of the Laboratory, the Technical Committee recommends that steps be taken immediately to remedy the defects.

5. Animal Facilities.

The need for experimental animals is steadily expanding. The use of small animals (mice, guinea pigs and rabbits) in assay of toxic vibrio products represents a large part of the need. Future projects of developing an animal model of cholera and of investigating the organ or systemic effect of vibrio products will require colonies of dogs and monkeys. These experiments can best be done in Dacca because of the rich supply of fresh stool, blood, urine and intestinal fluids during all stages of the clinical disease and because the investigator can collect and process the materials he studies. The animal house and its facilities are unfit for use. The creation of the proper environment for experimental and breeding colonies will necessitate the provision of electric power, sewage disposal, ventilation, air conditioning, cages, food supplies and a suite of experimental rooms with appropriate equipment and instruments.

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The building is of solid and sound construction but its design will make animal care, especially isolation, difficult. The Technical Committee recommends that the animal facilities be improved at an early date.

6. Balance in Programs of Clinical Investigation; Pediatric Problems.

Since more than 50% of the admissions to Pakistan-SEATO Cholera Research Laboratory are in the pediatric age, this institution should provide special facilities for the study of the cholera problems peculiar to the infant and child. These problems include extreme acidosis, hypoglycemia, osmotic and electrolyte aberrations, the remarkable immunity of the infant (under 1 year of age), neurological manifestations and renal insufficiency. The study would require a pediatric ward and study room, special balances, bassinets, pediatric beds and a microchemical laboratory. Moderate modifications of the bacteriological and immunological procedures will accommodate the pediatric study. However, more personnel will be required.

The Technical Committee recommends that these needs be met.

7. Time of Meeting of the Technical Committee and the Directing Council.

The Technical Committee recommends that in future the meetings of the Technical Committee be held in late November or early December and that the Directing Council meet in January. We have two reasons for this recommendation: (a) so that the visits will coincide with the cholera season; (b) so that the meeting can have a useful relationship to budgetary plans for the ensuing fiscal year.

8. Budget for Fiscal Year 1968.

The Technical Committee reviewed the budget for fiscal year 1968 and approves it in the light of projected needs. The Technical Committee, however, is concerned that inadequate provision has been made for renovating, expanding and refurbishing the Section on Bacteriology and the animal quarters. The Technical Committee recommends that a supplementary appropriation be sought to improve these essential functions.

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RECOMMENDATIONS ON BACTERIOLOGY LABORATORY

The laboratories were not designed for the enormous load now existing. The load is likely to increase in the future. A considerable renovation is imperative and the Technical Committee strongly recommends that this be done.

1. Autoclaves.

These are badly located and in poor operating condition. Capacity of present equipment is not adequate for single shift operation and the turnover time is very poor. A proper installation should involve a reliable steam generator capable of sustained 60 pounds pressure and a 2" line to be bled directly to autoclave. New installations should consider anticipated load character, i.e. intravenous fluids, media, glassware, etc.

2. Sterilising Ovens.

These are of inadequate capacity and tend to be overloaded. There is a distinct possibility that effective time temperature requirements are not fulfilled and that this may be an important factor in contamination of media and glassware.

3. Media Preparation Facilities.

Plate pouring situation is very poor. There is great waste because of contaminated materials. Large cold room badly needed for storage of media and specimens.

4. Glasswashing Facilities.

Presently seriously inadequate and improper. There is no supply of hot water for washing or for rinsing. One suspects that detergent and/or soap is to be found in considerable residue on each piece of glassware.

5. Physical Arrangement.

Space could be better utilised. The open gallery should be more fully employed. All sterilisers should be moved out and given shielding against the monsoon.

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6. Glassware Problem.

There is an evident attempt to cut costs by repeated utilisation of plastic laboratory materials such as Petri dishes. This matter is entirely unsatisfactory. Re-use should be discontinued. Glass Petri dishes are in short supply. The breakage rate is probably high under present conditions. A good investment would be a large laboratory glass-washing machine (such as "Better-Bilt").

7. Costs.

A proper refurbishing of the bacteriologic lay-out would require about \$80,000. In addition the present power source is not dependable. Proper laboratory operation demands reliable electric power.

IMMUNOCHEMISTRY

It is known that increasing age is associated with a rise in serum antibody titers to various cholera antigens and a corresponding fall in the incidence and case mortality rate. It is important to determine which of the antibody fractions (immunoglobulins) is related to protection because the answer affects the whole problem of vaccine production.

The 7S or IgG antibodies represent 75% of the total immunoglobulins found in the serum of cholera patients. The 19S or IgM antibodies likewise tend to remain within the circulation. The 7-13S, or IgA antibodies are essentially secreted, local antibodies. They tend to be found in the intestinal tract in cholera. In a variety of studies, using sera from affected patients and from normal healthy contacts, from maternal and cord blood, and from day-to-day studies of two cholera patients, it has been postulated that in the bloodstream the 7S antibody corresponds best with protection against cholera.

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Studies carried out in collaboration with guest investigator Dr. Paul Crabbe' of Louvain, indicate, however, the possible significance of 7-13S (IgA) antibody in the local intestinal reaction in a patient suffering from cholera from whom biopsy material was collected and studied by immunofluorescent methods. These observations on plasma cells in intestinal villi and their IgA antibody are well worth pursuing. In order to carry out these important studies adequate photomicrographic apparatus should be made available at PSCRL.

EPIDEMIOLOGY SECTION

1. Organisation.

In December, 1966 a third medical epidemiologist reported for duty at the Laboratory thus completing the basic professional staff specified in the recommendations of the Technical Committee Report for 1966. Also, as recommended, short term assignments were arranged in collaboration with CDC, USPHS for five medical epidemiologists and one bacteriologist. These men contributed effectively to the conduct of specific research projects and provided needed assistance in the epidemic of October-December, 1966. This practice should be continued as one solution to the variable demands of the PSCRL for professional personnel.

The present professional staff of the Epidemiology Section is technically competent and adequate in number to conduct the present heavy program commitments including large scale field trials of cholera vaccines, the development and evaluation of serological tests for diagnosis and immunity and limited but intensive epidemiological field studies of cholera as it occurs and spreads in selected study populations.

To meet the needs for epidemic assistance, additional staff, including medical epidemiologists, bacteriologists, a biostatistician-demographer and an immunochemist will be necessary if the Laboratory is to fulfil its broad missions of:

1. developing practical immunizing agents that can provide long lasting immunity;
2. determining the sources of infection, mode of spread and other essential factors in the occurrence of both endemic and epidemic cholera, and
3. providing epidemic aid, epidemiological consultation and demonstrating effective measures for the practical control of cholera in the SEATO nations.

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2. Immunology.

A major achievement of 1966 has been the demonstration of the effectiveness of a standard lot of cholera vaccine of average potency. Two doses administered at an interval of 28 days to children aged three months to 14 years in Matlab Bazar conferred 87% protection against clinical cholera during the epidemic which occurred one to three months following inoculations. Previous successful vaccine trials had been carried out with a vaccine of exceptionally high potency.

A comparative study of antibody response (agglutinins and vibriocidins) in young Pakistani children was made at the Balisera Tea Garden with results indicating that a representative lot of Pakistani-produced vaccine was comparable to the American - produced vaccine used in the successful 1966 field tests. A number of other vaccines were also compared for their antigenicity in humans and in turn will be compared by standard mouse tests used in routine vaccine production. These are major steps toward the production of uniformly effective and standardised vaccines for worldwide use.

A serious limitation of present vaccines is the apparent short duration of protection. Vibriocidal antibody titers decline to a low level within six months to one year, suggesting a concurrent reduction of protection. The present vaccines cannot be considered adequate for practical public health programs other than emergency epidemic measures or in those limited populations to whom repeated inoculations can be given.

It is recommended that the PSCRL plan future vaccine evaluations according to the following schedule:

- Fiscal Year 1967-69 : continue present study into second and third years to test duration of protection from the 2-dose schedule.
- Fiscal Year 1969-72 : initiate large-scale test with purified antigens, depending on availability.
- Fiscal Year 1972-75 : initiate large-scale test with the toxoid expected to be available by that time alone and in combination with purified somatic antigens.
- Fiscal Year 1975-78 : initiate large-scale tests with live, attenuated vaccines, both orally and parenterally.

The conduct of large-scale field trials should be planned on a basis of a minimum of three years because of the variation in the attack rate from year to year. It must be emphasised that East Pakistan is an endemic area for classical cholera. Vaccines found to provide protection here must also be tested in other areas where

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cholera has been absent for some years but now threatens and where various biotypes are occurring. Thus, a period of at least ten years and perhaps longer must be projected before an adequate practical vaccine having a long duration of effectiveness can be anticipated.

Concurrently with vaccine field trials, a variety of serological studies should be conducted within the vaccine test areas and in other selected population groups in East Pakistan and elsewhere to test the antigenic responses of new candidate vaccines, to develop new and more practical immunological tests, specially those dealing with antitoxic immunity, and to sharpen the effectiveness of these tools for epidemiological investigations. Of particular importance is the development of a test or tests measuring immunity to infection and disease. Such tests would greatly facilitate the screening and evaluation of new vaccines without primary dependence upon expensive and often protracted field trials.

3. Field Epidemiology.

The intensive field observations which have been conducted concurrently with the vaccine field trials have elucidated many factors of importance in the spread of cholera. In Rayer Bazar cholera recurs annually in two small areas characterised by greatest crowding, maximum mobility of the population, and most accessibility to the canals where contamination of water by boatmen has been repeatedly demonstrated. Significant spread to the more stable parts of the community has not occurred. In Sylhet a sharply localised water-borne epidemic was discovered during other field studies. In Matlab Bazar the cases continue to occur in sporadic fashion without evident source and often with little spread to family or community contacts. It is apparent that the factors determining the spread of the cholera vibrio are still obscure. Even in crowded and poorly sanitated populations direct person to person spread is difficult to demonstrate. Further detailed and more sophisticated field epidemiological studies should be pursued as one of the major functions of the PSCAL.

The addition of an anthropologist to the staff is a wise development since a detailed knowledge of the customs and mores of the people is essential to the interpretation of epidemiological findings and in determining the appropriate steps that can be taken in control procedures. The elucidation of the determinants of the occurrence of cholera may, in the long run, be more significant for the effective control of the disease than the development of an adequate vaccine.

CLINICAL INVESTIGATION PROGRAM

This year, a broad and comprehensive study of gastrointestinal physiology was instituted under the guidance of the Director, the Deputy Director and Mrs. Hare. The study was designed so that experiments conducted during the acute phase of the disease would be duplicated on the patient during convalescence; thus each patient would serve as his own control.

The studies were designed around the lavage procedure with the introduction of an electrolyte solution having the composition of cholera stool into the stomach, the duodenum or lower portions of the GI tract with collection at lower points of the GI tract including the collection at the anus. The solutions contained a non-absorbable marker so that volume changes over the section of the intestine under study could be determined.

In addition to the non-absorbable marker technique, the use of the bolus technique for measurement of gut volume was also employed and it is planned in the future to determine bi-directional fluxes with the use of appropriate isotopes.

Emphasis this year has been on the relationship of the vibrio and its products to the rate of stool production over the entire GI tract and over segments. The studies included rapid lavage at the rate of two to three liters an hour over the entire GI tract and proportionate rates over study segments. Having found that lavage itself did not have any appreciable effect on rate of stooling, various potentially therapeutic agents were studied. These included tetracycline, bacteriophage, convalescent sera and glucose. Studies in the future will include urea, electrolyte solution having the pH of 5 or less, cultures of lactobacillus, dinitrophenol, ouabain, etc.

Depending on results of studies, the electrolyte composition of the lavage solution will be varied as appropriate. The studies were designed to assess agents which could decrease gut lumen volume and increase gut lumen volume.

Projected studies include an attempt to assess mesenteric blood flow. One of the objects of the studies is to determine the relative importance of the flow of water and electrolytes from plasma to gut lumen, and the flow of water and electrolytes from gut lumen to plasma.

It was also proposed to investigate electrical potential changes in the intestine and to that end Dr. Sachar spent six weeks in the Laboratory of Ussing in Copenhagen.

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So far the effort in this program must be considered as a time of development of techniques so that meaningful results can be obtained, and in many studies the chemical analyses have not been completed. However, certain results have been obtained which are worthy of comment.

For the first time, potentials have been measured in man and it has been found that with the addition of **glucose** to the lavage solution there is a reversal of electrical potential and a marked negativity. This coincides with *in vitro* studies reported in the literature.

A good agreement has been obtained by three methods for determination of gut volume - Cr51, BSP and T-1824. The administration of glucose by stomach tube has repeatedly demonstrated that the stool output can be greatly diminished.

Following the administration of tetracycline to the lavage solution, within six hours stool was free of vibrio as determined by culture techniques. However, the diarrhea did not abate until an additional 18 to 24 hours had elapsed, indicating that a continuous supply of vibrio products is not necessary for maintenance of the disease state.

Results with convalescent sera and bacteriophage were tantalizing; in both there seemed to be a suggestion of an effect on vibrio counts and stool volume but the studies are too few and too irregular to draw any conclusions.

Balanced studies of pediatric cholera have begun, to ascertain if pediatric cholera due to the classical vibrio is the same as pediatric cholera due to the El Tor variant.

The Technical Committee is greatly impressed with the originality and high quality of the Clinical Investigation Program and its importance to an understanding of the pathogenesis of cholera as well as to elucidation of gastrointestinal physiology.

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(more)

APPENDIX 1

GENERAL OBSERVATIONS

1. Clinical Investigation Committee.

The Technical Committee notes with approbation ~~that~~ the Clinical Investigation Committee has been appointed and has met during the past year. The Clinical Investigation Committee has reviewed programs involving human experimentation and has provided important guidance to Pakistan-SEATO Cholera Research Laboratory.

2. Guest Investigators.

Several guest investigators have been appointed during the past year. The Technical Committee approves heartily of this step. At the same time, the Technical Committee wishes to point out that the relation of guest investigators to the Laboratory Sections and to the administration has not been defined adequately. We are concerned, for example, that direction has not been given to the Section Chiefs in Bacteriology and Clinical Chemistry to seek the advice of guest investigators in these sections.

3. Drug Testing.

Pakistan-SEATO Cholera Research Laboratory has been approached during the past year by several drug firms to assist in clinical evaluation of drugs. The Technical Committee wishes to register its opposition to such testing unless the action of the agent falls clearly within the central mission of the Laboratory and unless its study is of particular interest to a senior investigator. In all cases it is essential that its use be reviewed by the Clinical Investigation Committee.

4. Use of Consultants.

The Technical Committee approves the policy of spreading the visits of consultants throughout the year, rather than concentrating their visits at the time of the meetings of the Technical Committee. We recommend also that consultants be brought for periods of time long enough to ensure that they will have an impact on the work of the Laboratory.

(more)

TECHNICAL COMMITTEE:

Dr. Colin M. MacLeod
(Chairman)

C. MacLeod

Dr. Ali Nawab Khan

Ali Nawab Khan

Dr. James W. Howie

J. W. Howie

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

Sixth Meeting of the

DIRECTING COUNCIL

Dacca, East Pakistan - March 8-9, 1967

DIRECTOR'S ADMINISTRATIVE REPORT

DC 6/2

ADMINISTRATIVE REPORT

Fiscal Year 1966
(1.7.65 - 30.6.66)

During Fiscal Year 1966 the PSORL continued to mature as a research organisation. The activities of the Laboratory increased with the expansion of existing research programs and the inauguration of new projects and protocols.

The PSORL received consultative services, for the second time, from Lieutenant Gary Brown from NAMRU-2, Taipei, on administrative matters. Mr. Billie K. Myers, an electrical engineer from NIH, was detailed to the ORL last summer to study the power requirements of the Laboratory. Charles B. Myers was deputed to PSORL on TLY as Executive Officer from NIAID on retirement of Mr. Robert E. Freise. Mr. C. Myers evolved a scheme to reorganise the Administration Section. Complete reorganisation and implementation was awaited for Mr. Patrick G. Talmon, who joined as Executive Officer on 10 January, 1967.

Itemwise report follows:

Personnel

As indicated in Table I, there has been a sizeable increase in the number of staff because of the increased research activities with a consequential increase in supportive staff. The vaccination program at Matlab more than doubled during the year, which increased the number of staff. The Administrative Section was reorganised to include General Services (i.e. transport, security, gardening, courier service, maintenance, etc.) as a part of Administration. Following is a breakdown of staff by section:

TABLE I

	Foreign Training	Director's Office	Clin. Rsch.		Epidemiology		Bact-	Clin Labs	Adminis- tration
			Rsch.	Ward	IQ	Matlab VTS			
28.2.62	-	3	2	-	7	-	5	6	17 (40)
16.11.62	-	4	14	-	18	-	10	7	17 (70)
18.11.63	-	4	22	40	27	-	20	11	44 (168)
15.1.65	3	4	26	45	23	152	27	11	56 (347)
31.1.66	5	2	20	51	23	152	27	12	60 (352)
31.1.67	6	5	31	59	36	254	40	22	88 (541)

Consultants: Dr. K. A. Monsur, Bacteriology Section, Dr. A. K. M. A. Wahed, Clinical Research Section, Dr. Md. Fahimuddin, Epidemiology Section.

Foreign Training

The Foreign Training Program continued unabated during the year, and currently six of the Laboratory staff are abroad on training. Table II shows the list of employees abroad on training and their locations:

TABLE II

Clinical Research Section

Dr. Md. Rafiqul Islam	Chief Resident	Institute of Clinical Science, Queens University of Belfast, N. Ireland, U.K.
Dr. A. K. M. J. Alan	Physician	Birmingham General Hospital (British Postgraduate Medical Federation) Birmingham, U.K.
Dr. (Mrs.) K. M. Ally	Physician	Department of Medicine, College of Physicians & Surgeons of Columbia University, New York, U.S.A.

Bacteriology Section

Mr. Chittaranjan Dey	Senior Research Assistant	London School of Hygiene & Tropical Medicine, London.
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Epidemiology

Dr. (Mrs.) Shamsa Ahmad	Physician	School of Hygiene & Public Health, Johns Hopkins University, Baltimore-Maryland, U.S.A.
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Clinical Laboratories

Mr. Yousuf A. Saeed	Senior Research Assistant	Department of Biology University of Calgary Alberta, Canada.
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Changes in Key Personnel

Changes in key personnel during the period of 1 February, 1966 through 31 January, 1967 are shown in Table III. Mention may be made to the joining of Dr. William Kendrick Hare as Deputy Director and Mr. Patrick G. Talmon as Executive Officer.

TABLE III

Name & Designation	From/To which Section	Date of Joining	Date of Departure
1. Dr. Kendrick W. Hare Deputy Director	Director's Office	24.9.66.	-
2. Mr. Patrick G. Talmon	Director's Office	19.1.67.	-
3. Mr. Robert E. Freise	from Director's Office	30.1.64.	31.5.66.
4. Dr. (Mrs.) Ruth S. Hare	Clinical Labs.	24.9.66.	
5. Dr. K.M.S. Aziz Guest Investigator	Clinical Research	24.5.66.	
6. Dr. R. Northrup Research Physician	Clinical Research	19.7.66.	
7. Dr. Joseph L. Kinzie Research Physician	Clinical Research	18.9.66.	
8. Dr. M. M. Rahman Guest Investigator	Clinical Research	10.11.66.	
9. Dr. Albert Martin Research Physician	Clinical Research	25.12.66.	
10. Miss Aet Jarv Anthropologist	Epidemiology	17.9.66.	
11. Mr. M. Subhani Electronics Engineer	Administration	30.9.66.	
12. Dr. Gordon E. Schwab Microbiologist	Bacteriology	15.1.67	
13. Dr. S. S. H. Rizvi Chief	from Bacteriology	August '63	16.8.66

Physical Facilities

Inadequate physical facilities continue to be an acute problem for the PSCL. The Laboratory has expanded considerably since last year. The space now occupied is too small to properly house everything. Additional storage, office, laboratory and patient housing are needed. Negotiations for the construction of a new wing with AIB funding is under study. The GOEP Architect is drawing plans to be reviewed by USAID, Lacca, and will then be forwarded to USAID, Washington for final decision.

As mentioned in last year's Administrative Report, a two storey wing of the Rural Health Center at the Matlab Bazar was allocated to the PSCL

for use of the epidemiology field staff. That has since been completed and was formally inaugurated by Colonel S. A. Mallick, Director of Health Services, GOEP, on 31 July, 1966.

Other Facilities

Since its inception, the Laboratory has not had any hot water supply or any demineralised water supply for production of intravenous fluids.

Lately, a steam generating plant was located in the Institute of Public Health which had been sitting idle for several years. With their concurrence, the CKL ordered the necessary accessories and negotiated a contract to have the steam generator installed in one of the wings of the IPH to provide the PSCKL as well as the IPH with a dependable source of demineralised water and steam for autoclaves, stills and a hot water supply.

The chronic electrical and power supply problems were looked into by Mr. Billie R. Myers of NIH last summer, who submitted plans for a stable power supply at the Laboratory. His report is under study at the USAID, Tacca, and will be forwarded to AID, Washington. When installed, the Laboratory will have a stable power supply from its own generator.

Transportation

- A. Currently the PSCKL owns sixteen cars. We acquired two new Austin 1100's during the year. In addition, the Health Services of the GOEP loaned one Volkswagen microwagon which is currently being utilised as an ambulance. The Director and Deputy Director of the PSCKL have placed their personal cars for Laboratory use. Therefore, the PSCKL currently operates nineteen vehicles.

The two jeep wagoneers mentioned as ordered in the last Administrative Report, have not yet been received. The two Australian jeep station wagons have been declared uneconomically repairable and therefore are not serviceable. Table IV indicates the PSCKL operated vehicles.

TABLE IV

Vehicle	Model	Registration Number	Mileage as on 31.1.67
1. Austin 1100	1963	EBA 6032	62,032
2. Austin 1100	1966	EBE 4677	22,346
3. Austin 1100	1966	EBE 4678	22,956
4. Austin A7 (850)	1963	EBA 6033	51,259
5. Austin A7 (850)	1963	EBA 6034	51,699
6. Austin A7 (850)	1964	EBA 7026	37,546
7. Austin A7 (850)	1964	EBA 7027	39,299

Vehicle	Model	Registration Number	Mileage as on 31.1.67
8. Plymouth	1964	EBA 7156	46,190
9. Land Rover	1962	EBA 2899	40,229
10. Land Rover	1962	EBA 2781	56,474
11. Willys Jeep	1960	EBD 6651	90,202
12. Jeep Station Wagon	1964	EBA 8729	57,765
13. Jeep Station Wagon	1960	EBD 6650	96,673
14. Volkswagon microbus	1961	EBA 1041	55,576
15. Chevrolet Station Wagon	1961	EBD 8978	46,089
16. Dodge Ambulance	1962	EBA 2003	41,256
17. Dodge Sedan	1964	EBE 3923	18,765 (on Loan)
18. Mercedes Benz	1962	EBA 5569	58,511 (on Loan)
19. Volkswagon Microvan	1962	EBT 441	(on Loan)

Aside from the three cars on loan, the PSCL owns and operates a varied assortment of vehicles. As indicated by the mileage column, nearly all the cars have been driven a considerable number of miles - some cars do not accurately reflect true mileage since their speedometers are inoperable - and under the most severe operating conditions. Many of these cars should be replaced immediately, but due to the dollar budget limitations and the long waiting periods involved between ordering and arrival of cars, vehicles which normally should have been replaced long ago, have been, out of necessity, kept on the road although maintenance costs have proportionately increased. Cars bought with the U.N. fund are exempt from import taxes and the Laboratory has experienced difficulties in ordering cars from the U.N. The same is true in ordering any item (car and boat parts, etc.) not covered under a UNLSCO Agreement which limits duty-free imports to certain scientific items. Although requested, the Australian Government has not responded to the PSCL inquiries for replacement of the two inoperable jeeps.

- B. Other than vehicles, the PSCL has a fleet of watercrafts comprising speed boats, jet boats and a launch loaned by the GOEP. The number has increased due to the acquisition of new boats from the U.S. The fibre glass boat loaned to PSCL by the Consul-General of the U.S.A. has finally been purchased and added to the fleet. All these boats are used for transportation in connection with the field project at Matlab.

Lists of PSCL boats and engines are shown in Tables V and VI respectively.

TABLE V

Watercraft

<u>Type</u>	<u>Size</u>	<u>Number</u>	<u>Remarks</u>
1. Fibre Glass (Shark)	14'	4	1 outdated
2. Fibre Glass (Boston)	13 $\frac{1}{2}$ '	3	Good condition
3. Aluminium	14'	2	Good condition
4. Aluminium	9'	1	Good condition
5. Fibre Glass (jet boat turbo- craft with Zephyr 6 cylinder engines)	14 $\frac{1}{2}$ '	2	Both out of order
TOTAL =		<u>12</u>	

TABLE VI

<u>Type</u>	<u>Horse Power</u>	<u>Number</u>	<u>Remarks</u>
1. Johnson	5 $\frac{1}{2}$	1	Deadlined
2. Johnson	7 $\frac{1}{2}$	2	Deadlined
3. West Bend	18	1	1 out of order
4. West Bend	20	1	Running
5. Johnson	28	2	Running
6. Johnson	33	10	1 out of order
7. Evinrude	40	1	Overhauling
TOTAL =		<u>18</u>	

Both of the turbocraft jet boats are out of order. One is deadlined for lack of spares and the other met with a fire accident on a trip back to Matlab. The second is under repair and an insurance claim has been filed.

The hospital launch, "Joseph E. Snadel", is also inoperable. Estimates show that it is not feasibly worth repairing. This launch has always been uneconomical to operate and very expensive to maintain. A study of more economic alternatives is under way and a sum has been set aside for replacement of the present launch in the proposed budget for Fiscal Year 1968.

Communications

The radio communication system donated by the Australian Government is still awaiting shipment after it was diverted back to Sydney during the Indo-Pak hostility. Very recently permission was accorded by the GOF for importation. The major hurdle at the present time is obtaining a licence from the GOF for operation of the equipment. Hopefully, this licence will be received shortly and barring unforeseen circumstances, the radio communication system will be in operation within the current year.

Accounting

As is evident from the Audit Report, the accounting and other financial transactions of the Laboratory functioned smoothly. Upon the recommendation of Mr. Charles B. Myers, who was with the Laboratory on TDY from NIAID, NIH, procedures are being set up to make costings project/protocol-wise.

Equipment and Supplies

Efforts are still underway to improve property accountability and property control. The PSORL continues to have problems in clearances of supplies and equipment through Customs. This makes it necessary for the frequent travel of the supply staff to Chittagong for Customs facilitation.

Problems with PSORL consignments received from the U.S.A. are less, but consignments from other countries are stranded for long periods in Chittagong.

As mentioned above, although the PSORL has an exemption under the coverage of a UNESCO Agreement, this does not cover all items required here, viz. vehicles, outboat engines, glassware, chemicals, spares, X-ray equipment and feed items.

The equipment listed below was received during the year through 31 January, 1967:

Property of the United States Government on Memorandum Receipt

Air Conditioners	14	Boat	3
Autoclave	1	Centrifuge	6
Adding Machine	1	Centrifuge Refrigerated PR-2	2
Aquarium Tank	3	Centrifuge, Ultra, Beckman Model	
Band Saw	1	L	1
Blood Gas Apparatus (Van Slyke)	2	Cryostat Cabinet	1
		Calculating machine	2
Balance	4	Chloride Titrator	1
Water Bath	6	Photocopying Machine	1

Drill Press	1	Microtome Freeze & Microtome	2
Water Demineraliser	2	Microscope	5
Electrocardiograph	1	Motor outboat	9
Electrophoresis	1	Metal saw	1
Evaporator	2	pH Meter	1
Freezer	1	Oven	4
Refrigerator	2	Osmometer	1
Flame Photometer	2	Power Supply	3
Fluoro-microphotometer	1	Photoflurometer	1
Fraction Collector	4	Pump	4
Fume Hood	2	Projector 8 mm.	1
Grinder and Polisher	1	Spectrophotometer Perkin Elmer 202	1
Incubator	8	303	1
Infusion Pump	1	Spectrophotometer other models	3
Jet Gun	8	Scale	3
Lathe Machine	2	Transformer	7
		X-Ray Shield	1

This includes surplus, but still operable, US Government property received from NIH. Surplus items are not charged against the budget.

Purchased with U.K. Fund

Austin 1100	2	Library Storage Cabinet	1
Cryostat	1	Oven, Wax Embedding	1
Dictating Machine	2	Jet Boat	1

Purchased with Local Currency

Adding Machine	1	Fan, Ceiling	10
Boat with motor	1	Fan, Pedestal	2
Balance	1	Filing Cabinets	24
Deep Freeze	3	Laboratory & Office furniture	
Duplicating Machine	1	Racks	40

Refrigerator	3	Typewriter	8
		Volkswagon Microbus	1

Purchased Through Bank of Bethesda Account

Radio-Meter pII	2	Furniture	0
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PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

Sixth Meeting of the

DIRECTING COUNCIL

Dacca, East Pakistan - March 8-9, 1967

DIRECTOR'S FINANCIAL REPORT

DC 6/3

FINANCIAL REPORT

Fiscal Year 1966

(From 1 July, 1965 through 30 June, 1966)

Expenditures during the year under review increased with the addition of supportive staff and supplies and materials for the expansion of on-going research programs and the inauguration of new studies and protocols. The PSCL incurred additional expenses as a result of increasing its contributing share to the Staff Provident Fund in order to bring it in line with the minimum level currently in effect in local organizations.

A statement of income sources and expenditures by Fund follows:

1. ChL Operating Fund

At the close of business on 30 June, 1966 an uncommitted balance of Rs 19,036 remained, of which the GOEP unrestricted portion of Rs 9,328 was transferred to the Capital Reserve Fund and the U.S. share was carried over to Fiscal Year 1967. Appendix I shows the breakdown of expenses by budget line items. Total expenditure of Rs 549,519 exceeded the previous year's Rs 500,410 by approximately 10%.

2. NIH Research Agreement

Rupee

After closing of accounts an uncommitted balance of Rs 388,940 remained and was carried over to FY 67. Appendix II shows the income and expenditures of the fund during Fiscal Year 1966. The increase in the expenditure of this fund is approximately 23% over the last fiscal year.

Dollar

This portion is released by the NIH to the Bank of Bethesda Account maintained and operated by PSCL. This account opened with an unobligated balance of \$22,590 carried over from Fiscal Year 1965. This amount, plus \$65,000 transferred from the SLATO-AIB-NIH Fund during the fiscal year, gave the PSCL a total opening balance of \$87,590. After all expenses, this account turned up with an uncommitted balance of \$21,087 for carry-over to Fiscal Year 1967. Appendix II(b) dollar portion accounts for the operation of this portion of the fund.

3. Capital Reserve Fund

The opening balance of this fund carried over from FY 65 was Rs 101,770.00. During the fiscal year under review, USAIL contributed Rs 96,000. These sums, plus the interest accrued, totalled Rs 199,062 which was the sum available for the whole fiscal year. Appendix III shows the total amount of funds available and expenditures for this fund through the year. After all expenses were accounted the uncommitted balance of Rs 59,274 plus the transfer of Rs 9,328 (GOEP share of unrestricted portion of the ChL Operating Fund) gave this fund Rs 68,602 carry-over. However, the matching portion of the GOEP of Rs 96,600 to the AIB contribution (see above) was delayed until FY 67. Therefore, the Capital Reserve Fund had an opening balance of Rs 164,602 for FY 67.

4. U.K. Funds

During the U.K. financial year 1966 (1 April, 1965 through March 31, 1966), the commitment of the Government through the Ministry of Overseas Development was £11,000. Out of this fund a sum amounting to £1,467 was deducted because this amount was a carry-over from FY 65 and had been obligated by the PSCL in FY 66 and therefore was deducted from the FY 66 opening balance of £11,000. U.K. support regulations do not permit carry-overs from one fiscal year to the next.

The Ministry of Overseas Development released £5,000 to the Crown Agents and reserved the remainder, i.e., £6,000 minus £1,467 for salary of U.K. deputed persons to the CL and for the support of training in the U.K. Therefore actual funds available for FY 66 amounted to £9,533.

A complete breakdown of expenditures recast according to PSCL object class and financial year incurred by PSCL (through Crown Agents) and the Ministry of Overseas Development are shown in Appendix IV.

5. SEATO-AID-NIH Cholera Research Fund

The PSCL utilised \$220,724 out of this fund which is controlled by the Chairman of the NIH Cholera Advisory Committee. \$65,000 of this amount was transferred to the Bank of Bethesda account. A breakdown of the expenditures incurred is shown below, which was made available to the CL from NIH.

Travel & Transportation of Persons	9,307
Travel & Transportation of Things	32,575
Printing and Reproduction	12
Other Contractual Services	82,037*
Supplies and Materials	49,621
Equipment	47,172
TOTAL	220,724

* includes \$65,000 transferred to Bank of Bethesda account.

6. USAIL Trust Fund

Estimated logistic support received by PSCL from this fund in terms of paragraph 63 of the Revised Agreement between GOP and USAIL of 30 December, 1961 amounted to Rs 599,507. This covers expenses connected with support of US personnel assigned to PSCL and costs for furnishing fuels for PSCL vehicles and boats and their maintenance. Itemised list of expenditures is shown below:

	Rs
Personnel Services	11,942
Travel & Transportation of Persons	141,592
Transportation of Things	66,781
Rent, Communications & Utilities	160,661
Other Contractual Services	111,731
Supplies & Materials	106,800
TOTAL	599,507

7. Other GGP Contributions

This covers support received by PSORL in terms of accommodation (space), electricity, water supply, telephone bills and other incidental costs, provided by the GGP as stated in paragraph G1 of the revised Agreement between GGP and USAID of 30 December, 1961. Estimated total support by the GGP amounts to Rs 400,000.

8. Other Supports

(a) Government of Australia

Total commitments of the Australian Government during fiscal year 1966 was £25,100 and broken down as follows:

	<u>£</u>
Personnel Services	5,000
Supplies & Materials	100
TOTAL	5,100

(b) NHI

Total commitments by the National Heart Institute and the Office of International Research during the fiscal year under review for the support of personnel assigned to PSORL, was \$72,249 and broken down as follows:

	<u>\$</u>
Personnel Services	54,708
Travel & Transportation of Persons	15,912
Transportation of Things	1,629
TOTAL	72,249

Summary

Appendix V is a list indicating the total support available to the PSORL by source with total expenditures for each source and all funds converted to Pakistan currency. Appendix V also shows the total support by contributing nation broken down by percentage.

Appendix VI is also a summary of total support with amounts shown in the currency of the respective contributing nation. This appendix also summarises the various carry-overs available for fiscal year 1967.

APPENDIX ICRL OPERATING FUNDSTATEMENT OF EXPENSES FOR FY 1966(1 July, 1965 to 30 June, 1966)Income

Opening balance for FY 1965-66 after transfer of a GOEP portion of unpaid balance of FY 1964-65	Rs 10,265.17
Contribution by GOEP for FY 1965-66	Rs 275,000.00
Contribution by US Government PL 480 (Sec. 104K) for FY 1965-66	Rs 275,000.00
Interests earned on fixed deposits	Rs 8,290.55
	Rs 568,555.72

Expenditure

1. Personnel Services	Rs 379,274.82
2. Travel & Transportation of Persons	Rs 13,225.41
3. Transportation of things	Rs 8,075.79
4. Rent, Communications & Utilities	Rs 11,477.07
5. Printing & Reproduction	Rs 6,125.00
6. Other Contractual Services	Rs 19,295.00
7. Supplies and Materials	Rs 102,528.39
8. Equipment	Rs 9,517.93
	Rs 549,519.41

FINAL ACCOUNT

Total Income	Rs 568,555.72
Minus Total Expenses	Rs 549,519.41
Total Unutilised Balance =	Rs 19,036.31

U.S. Govt. share of unutilised balance	Rs 9,708.67 (51%)
GOEP share (unrestricted portion)	Rs 9,327.64 (49%)
	Rs 19,036.31

NIH RESEARCH AGREEMENTSTATEMENT OF EXPENSES FOR FY 1965-66

(1 July, 1965 to 30 June, 1966)

Rupee Portion

<u>Income</u>		<u>Expenditure</u>	
Opening balance from FY 1964-65 uncommitted carry-over	Rs 211,009.82	1. Personnel Services	Rs1,075,843.60
NIH Contribution for FY 1966	Rs1,956,000.00	2. Travel & Transportation of Persons	Rs 385,842.65
Interests earned on fixed deposits	Rs 38,641.13	3. Transportation of Things	Rs 11,060.41
		4. Rent, Communications & Utilities	Rs 9,898.18
		5. Printing & Reproduction	Rs 4,475.99
		6. Other Contractual Services	Rs 71,824.26
		7. Supplies & Materials	Rs 183,961.83
		8. Equipment	Rs 73,803.48
	Rs2,205,650.95		Rs1,816,710.40

FINAL ACCOUNT

Total Income	Rs2,205,650.95
Minus Total Expenses	Rs1,816,710.40
Total Uncommitted Balance available for carry-over to FY 1967	Rs 388,940.55

APPENDIX II(b)

DOLLAR PORTION

Account with Bank of Bethesda

&

Operated by PSCRL

Income

Opening balance as of July 1, 1965 (carry-over of FY 1964-65 unspent balance)	\$ 22,589.72
NIH Contribution for FY 1965-66	\$ 65,000.00

\$ 87,589.72

Expenditure

1. Personnel Services	\$ 52,486.49
2. Travel & Transportation of Persons	\$ 4,714.76
3. Transportation of Things	\$ 1,237.02
4. Rent, Communications & Utilities	\$ 689.13
5. Printing & Reproduction	-
6. Other Contractual Services	\$ 1,727.72
7. Supplies & Materials	\$ 4,693.44
8. Equipment	\$ 955.02
	<u>\$ 66,503.58</u>

FINAL ACCOUNT

Total Income	\$ 87,589.72
Minus Total Expenses	\$ 66,503.58
Total fund available to carry over to FY 1967	<u>\$ 21,086.14</u>

APPENDIX III

CAPITAL RESERVE FUND

Statement of Expenditures for FY 1966 (1 July, 1965 to 30 June, 1966)

Income

Opening balance from uncommitted portion of FY 1964-65 plus GOEP transfer share to CRF from CRL OPF	Rs 101,770.09
USAID Contribution for FY 1966	Rs 96,000.00
GOEP Contribution on matching basis for FY 1966	*(Rs 96,000.00)
Interest earned on fixed deposits	Rs 1,292.00

* Although the GOEP share was due to be released during FY 66, it was actually released in August, 1966. Therefore this amount was not available during FY 66 and is not reflected in the amount available for FY 66.

Rs 199,062.00

Expenditure

1. Refitting of glass frames	Rs 757.60
2. Repairing charges of animal house	Rs 476.64
3. Cost of two water tanks	Rs 556.00
4. Water pumping set complete	Rs 650.00
5. Repairing charges of Shaitnol House	Rs 3,296.47
6. Fitting, fixing & replacement of door wire mesh	Rs 510.00
7. Repairing & reconstruction of garage (cyclone damage)	Rs 7,744.70
8. Construction of cholera ward at Matlab	Rs 74,000.00
9. Mosaic work of cholera ward at Matlab	Rs 3,905.00
10. Construction of approach road	Rs 16,344.30
11. Construction of brick fence in CRL garden	Rs 764.14
12. Whitewashing of CRL building	Rs 7,334.52
13. Painting & new construction of cartridge fuse & electric main switch	Rs 1,410.00
14. Addition & alteration charges of animal house	Rs 4,124.86
15. Addition & alteration of CRL building	Rs 4,285.04
16. Cost of wiring of light points	Rs 400.00
17. Wiring & fitting of power lines	Rs 509.00
18. Fitting & fixing of doors	Rs 230.80
19. Electrical wiring of Matlab hospital	Rs 5,635.92
20. Addition & alteration charges of animal house	Rs 6,853.45
	Rs 139,788.44

FINAL POSITION

Total Income	Rs199,062.09
Minus Expenditures	Rs139,788.44
	Rs 59,273.65
Plus proposed transfer to CRF (unspent balance of GOEP portion of OPF, FY 66)	Rs 9,327.79
Plus matching GOEP portion of Rs 96,000 released in August, 1966 (FY 67)	Rs 96,000.00
Total unutilised balance available for carry-over to FY 67	Rs164,601.44

APPENDIX IV

U.K. FUNDS

(Released through the Ministry of Overseas Development)

U.K. FY 1966

(1 April, 1965 to 31 March, 1966)

Income

Released to the ODM for FY 1966 £11,000 Os. Od.

Expenditure

1. Personnel Services	£2,759.18s. 8d.
2. Travel & Transportation of Persons	£ 324. 3s. 7d.
3. Transportation of Things	£1,190. 3s. Od.
4. Rent, Communications & Utilities	£ 93.13s. 3d.
5. Printing & Reproduction	-
6. Other Contractual Services	£ 123.11s. 5d.
7. Supplies and Materials	£ 683.16s. 3d.
8. Equipment	£2,150. 9s. 1d.
	£7,325.15s. 3d.*

£11,000 Os. Od.

ACTUAL POSITION

Total Contribution	£11,000 Os. Od.
Minus Total Expenditure	£ 7,325 15s 3d.
	£ 3,674. 4s 9d.
Minus	£ 1,467 0s Od.**
	£ 2,207 4s 9d.***

* This sum has been directly taken out from £11,000 by ODM because that was a carry-over from the previous fiscal year and spent by PSCRL, which U.K. regulations do not permit.

* This includes spendings by PSCRL through Crown Agents totalling £4,024.6s.2d. The remainder, £3,301.9s.1d. was spent by ODM for salary and other supports for U.K. deputed employees and for supporting PSCRL trainees in the U.K.

*** This sum will lapse because of U.K. regulations which forbid carry-overs from one fiscal year to the next.

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

Sixth Meeting of the

DIRECTING COUNCIL

Dacca, East Pakistan - March 8-9, 1967

REVIEW OF THE AUDITOR'S REPORT AND

THE DIRECTOR'S COMMENTS

DC 6/4

COMMENTS ON THE AUDITORS' REPORT

FISCAL YEAR 1966

(1 July, 1965 through 30 June, 1966)

On page 5 of the auditors' report, two recommendations were made: number 1 concerning property accountability, and number 2 concerning USAID Trust Fund Support.

Comments on Recommendation No. 1

At the time of the audit for Fiscal Year, 1965, the auditors recommended to discard all stock cards for one-time purchases of expendable items. This recommendation was carried out for all one-time purchases of expendable items, except for drugs and medicines which were kept for stocking and accounting purposes. That is why these particular stock cards showed up in the audit for fiscal year 1966. Since the time of the last audit, an ad hoc committee was set-up to study this problem and upon the recommendation of the committee the Laboratory recently initiated a system of standardised stock purchases for drugs and medicines which, in effect, will avoid the necessity of maintaining stock cards for any one-time purchase of expendable items.

Comments on Recommendation No. 2

The gasoline, lubricating oil and grease etc. consumed by the operation of the hospital launch "Joseph-E-Smadel" are furnished by USAID. The point referred to is under investigation and a report will be submitted to USAID soon.

OFFICE OF THE ASSISTANT DIRECTOR/CONTROLLER
UNITED STATES AID MISSION TO PAKISTAN
AGENCY FOR INTERNATIONAL DEVELOPMENT

REPORT OF AUDIT

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY
Project No. 391-510-138

For the Period from July 1, 1965 to June 30, 1966 (FY 1966)

Report No. 67-14

February 7, 1967

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REPORT OF AUDIT

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY Project No. 391-510-138

For the Period from July 1, 1965 to June 30, 1966 (FY 1966)

Scope of Examination

Pursuant to a standing request by the Pakistan-SEATO Cholera Research Laboratory (CRL) in Dacca, East Pakistan, we have examined certain CRL financial statements covering the year ended June 30, 1966. Our examination covered only those funds which were directly controlled by the CRL, and it did not include (a) that portion of the SEATO-AID-NIH (National Institutes of Health, U.S. Department of Health, Education, and Welfare) "Cholera Research Fund" which is expended by NIH for the CRL but is not directly controlled by the Director of the CRL, (b) other dollar support supplied by NIH, (c) support by the Government of the United Kingdom, or (d) logistical support in kind by the GOP. (The "Background Information" section below shows details of the various funds and support involved.)

Our examination covered the receipts, expenditures, and balances shown in the applicable CRL financial statements and USAID records. The examination was performed in accordance with generally accepted auditing standards, and included those tests of accounting records and the underlying fiscal documents considered necessary under the circumstances. The CRL's procedures and records were examined for compliance with the CRL's published financial regulations, as well as for the general adequacy of internal control.

Background Information

The CRL was established in 1960 as a part of a regional cholera research program sponsored by SEATO. The Governments of the United States, Pakistan (GOP), the United Kingdom, and Australia have assisted the CRL's operations by providing funds, equipment, and administrative and technical personnel.

The GOP and AID entered into an agreement on October 14, 1960, to establish the CRL at Dacca. This agreement was revised on December 30, 1961, and again on July 7, 1963. Its present term expires on June 30, 1967, but at the 5th meeting of the CRL's Directing Council in Dacca in March 1966, a resolution was passed to continue the CRL, and the CRL Director was authorized to proceed with negotiations for a further 3-year extension of the agreement, to June 30, 1970. These negotiations are now in process.

The CRL has been financed or supported from the following sources:

1. SEATO-AID-NIH Cholera Research Fund. Dollar funding to the CRL is supplied by the SEATO-AID-NIH Cholera Research Fund. This fund is administered by NIH, and it covers NIH's world-wide cholera research program, rather than just the operations of the Pakistan-SEATO CRL. The total amount

and sources of this world-wide fund are not known to us, but part of this fund is financed by AID. Through June 30, 1966, AID/W had authorized \$540,000 and contributed \$400,000 to NIH, and the USAID/Pakistan had authorized and contributed another \$381,400 to NIH through AID/W, under project agreements issued in FYs 1962, 1964, and 1965. Of the total amounts contributed to this fund by AID and others through June 30, 1966, NIH had deposited \$166,000 in the Bank of Bethesda, Bethesda, Maryland, for the direct use of the CRL.

As shown in Exhibit A hereof, of the total amounts contributed to this fund by AID and other agencies, NIH reports shown that it had obligated \$671,512 for the CRL through June 30, 1966 (exclusive of \$144,911 which the CRL had obligated against the \$166,000 in the CRL-controlled Bethesda Bank account).

Except for the \$166,000 controlled by the CRL, the utilization of this fund was not included in the scope of our audit, as all accounting and other records and controls are handled by NIH in Washington, D.C.

2. NIH U.S.-Technician Funding. NIH also pays for the services of American technicians assigned to the CRL. Their salaries and other dollar allowances, benefits, and costs are paid directly by NIH from sources other than the above world-wide fund.

Utilization of these funds, the amounts of which are not known to us, was also not within the scope of our examination.

3. NIH Research Agreement Fund. This is a rupee fund furnished to the CRL under an NIH-CRL research agreement. These rupees are funds allocated by the U.S. Treasury to NIH under Section 104(k) of PL 480 Title I agreements in Pakistan. As indicated in Exhibits Band C, NIH had provided Rs. 5,381,000 of these funds to the CRL through June 30, 1966 (Rs. 1,956,000 during FY 1966).

Our examination covered FY 1966 utilization of this fund.

4. GOP-NIH General Operating Fund. This is a rupee fund generated by equal contributions by NIH and the GOP each fiscal year. Here again, the NIH contribution is from its Section 104(k) Title I holdings. That portion of this fund's fiscal year-end balance which is attributable (a) to the NIH contribution is carried forward to the next fiscal year, and (b) to the GOP contribution is transferred to the "Capital Reserve Fund" described below. As indicated in Exhibits B and C, a total of Rs. 1,155,000 had been contributed to the General Operating Fund by the GOP and Rs. 1,050,000 by NIH through June 30, 1966 (Rs. 275,000 by each agency during FY 1966).

Our examination covered FY 1966 utilization of this fund.

5. GOP-USAID Capital Reserve Fund. This is a rupee fund which was established in 1962 by a GOP contribution of Rs. 2,680 and a USAID contribution of its Section 104(e) Title I rupees in the net amount of Rs. 95,200. From FY 1962 through June 30, 1966, additional contributions

totaling Rs. 238,290 were made by the GOP to this fund (Rs. 9,328 during FY 1966); however, these GOP contributions all represented uncommitted balances from the General Operating Fund transferred hereto as described in the preceding paragraph.

In FY 1966, the USAID contributed an additional Rs. 96,000 to this fund from its Section 402 (Mutual Security Act) holdings. A matching GOP contribution was made in FY 1967 (August 1966), after the cut-off date of this audit.

Our examination covered FY 1966 utilization of this fund.

6. United Kingdom Contributions. The U.K. provides annual support to defray the cost of the technicians and equipment it furnishes to the CRL. During FY 1966, a total of \$ 11,000 were allocated to the CRL for this purpose, and actual expenditures of \$ 10,018 were reported. These expenditures were not covered by our examination.

7. Government of Australia Contributions: In previous fiscal years the Government of Australia has supplied the CRL with both equipment and technicians' services. Such assistance was not supplied during the period of the current audit.

8. Logistical Support Funding: The GOP and the USAID provide the following additional support:

a. GOP In-Kind Support: The GOP has provided (1) physical plant and a 20-bed hospital unit for the CRL at the Dacca Institute of Public Health, and (2) physical facilities for a CRL research center at Matlab Bazar, East Pakistan. The GOP pays for the repair and maintenance of these facilities, as well as for all utilities used by the CRL. These activities were not covered by our examination.

b. USAID Trust Fund Support: The USAID provides Trust Fund rupees for the administrative support and other local expenses of the CRL's American staff and for the costs of gasoline, oil, and maintenance of the CRL's vehicles and boats. As indicated in Exhibit D, a total of Rs. 1,430,278 had been expended for this purpose through June 30, 1966 (Rs. 448,904 during FY 1966). Our examination covered FY 1966 utilization of these funds.

Exhibit E hereof summarizes the above eight categories of CRL support to the extent we could determine locally. As can be seen, these have totaled at least \$3.3 million to date, of which over \$1 million applied to FY 1966. This is illustrated in the following table which presents the support by funding-source rather than by support-category (as is the case in Exhibit E):

Contributions To or Expenditures For The CRL

<u>Contributor and Type of Funding</u>	<u>Amount (U.S. \$ or \$ Equiv.) 1/</u>	
	<u>Total</u>	<u>FY 1966 Portion</u>
NIH:		
Cholera Research Fund (AID & Other \$)	\$ 837,512	\$ 287,227
Technicians (Appropriated \$)	396,237	80,000
Research Agreement Fund (Sect. 104(k) Rupees)	1,121,042	407,500
General Operating Fund (-do-)	218,750	57,292
Subtotal	<u>2,573,541</u>	<u>832,019</u>
Government of Pakistan (GOF):		
General Operating Funds (GOF-Owned Rupees)	240,625	57,292
Capital Reserve Fund (-do-)	20,558	20,000
Logistical Support (In-Kind & -do-)	Unknown	Unknown
Subtotal	<u>261,183</u>	<u>77,292</u>
United Kingdom (British Pounds Sterling)	<u>145,600</u>	<u>30,800</u>
Government of Australia (Technicians & Equip.)	<u>Unknown</u>	<u>-0-</u>
AID:		
AID/W (Appropriated \$ to NIH)- \$400,000	2/	2/
USAID/Pakistan:		
Project \$ to NIH (through AID/W) - \$381,400	2/	2/
Capital Reserve Fund (Sect. 104(e) Rupees)	19,833	-0-
Capital Reserve Fund (Sect. 402, MS Act, Rupees)	20,000	20,000
Trust-Fund Support (Counterpart Funds)	<u>297,975</u>	<u>93,522</u>
Subtotal	<u>337,808</u>	<u>113,522</u>
Total	<u>\$3,318,132</u>	<u>\$1,053,633</u>

- 1/ Pakistani rupees converted at Rs. 4.80 to \$1.00 and British pounds sterling at \$2.50 to £ 1.00.
- 2/ Attributed to the NIH Cholera Research Fund total (first line entry above).

Summary of Findings and Recommendations

The CRL financial statements subject to our examination, as well as the underlying records and related procedures, were found to be generally satisfactory. However, we noted (a) that some improvement in the CRL's property controls is still needed (see recommendation No. 1, page 8), and (b) possible misuse of fuel oil supplied to the CRL by the USAID (see recommendation No. 2, page 8).

Our prior audit report (No. 66-20, dated January 20, 1966) contained one recommendation relating to the control of non-expendable property. This was not completely implemented and has been repeated as recommendation No. 1 of this report.

Prior to publication, a preliminary draft of this report was reviewed and concurred in by the USAID's Provincial Director/East Pakistan and its Chief, Public Health/East Pakistan.

DETAILED FINDINGS AND RECOMMENDATIONS

Financial Statements

Applicable portions of the CRL's financial statements and various supporting schedules prepared by us from CRL and USAID records or reports are presented in Exhibits A through E hereof. With the exception of the CRL's departure from a true accrual basis in accounting for its obligations (see footnote 1/ to Exhibit C), in our opinion the financial statements for the various funds controlled directly by the Director of CRL present fairly the status of these funds as of June 30, 1966, and the results of operations for the year then ended.

Property Accountability

We noted a marked improvement in the system of property control since our last audit. However, the CRL is still maintaining property cards for one-time purchases of non-stock expendable items which are issued immediately upon receipt.

Recommendation No. 1

The USAID's Public Health Division should assure that inventory cards for expendable property are maintained by the CRL only for those items which are regularly stocked or are to be kept in the storeroom for some time.

USAID Trust-Fund Support

Our review of the CRL expenditures paid with USAID-furnished Trust Funds disclosed that the USAID paid for 660 gallons of diesel oil, 40 gallons of lubricating oil, and 10 pounds of grease delivered to the CRL launch "Joseph E. Smadel" between January 31 and February 26, 1966. During this period, the log book of this launch showed that it was under repair at Narayananj. The delivery tickets of the suppliers showed that the material was signed for by a CRL employee.

Recommendation No. 2

The USAID's Public Health Division, together with CRL, should (a) investigate the use of the above oils, and (b) assure that in the future proper controls are exercised over their receipt, storage, and issue.

CUMULATIVE DOLLAR OBLIGATIONS INCURRED AGAINST THE SEATO-AID-NIH CHOLERA RESEARCH FUND
FOR THE PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY (CRL)
Through June 30, 1966

Description	Through 6/30/65		7/1/65 - 6/30/66 (FY 1966)		Through 6/30/66	
	Controlled by NIH 1/	Controlled by CRL	Controlled by NIH 1/	Controlled by CRL	Controlled by NIH 1/	Controlled by CRL
Personal Services	\$ 2,013	\$ 66,967	\$ -	\$ 52,486	\$ 2,013	\$ 119,453
Travel & Transportation of Persons	45,327	1,098	9,307	4,715	54,634	5,813
Transportation of Things	83,748	3,692	32,575	1,237	116,323	4,929
Rent, Communications, & Utilities	163	1,093	-0-	689	163	1,782
Printing & Reproduction	34	-0-	12	-0-	46	-0-
Other Contractual Services	43,728	1,598	82,037	1,728	125,765	3,326
Supplies and Materials	153,259	2,256	49,621	4,693	202,880	6,949
Equipment	<u>122,516</u>	<u>1,704</u>	<u>47,172</u>	<u>955</u>	<u>169,688</u>	<u>2,659</u>
Total Obligations	\$ <u>450,788</u>	\$ <u>78,408</u>	\$ <u>220,724</u>	\$ <u>66,503</u>	\$ <u>671,512</u>	\$ <u>144,911</u>

1/ As shown in NIH reports to the CRL, less the obligations included therein which applied to the CRL-controlled Bank of Bethesda account; these have been shown in the separate columns, and the following table thereon was prepared during our audit:

CRL Bank of Bethesda account, FY 1966 Transactions (Per CRL Records)

Unobligated Balance at July 1, 1965	\$ 22,590
NIH Funds Transferred during FY 1966	<u>65,000</u>
Total Available	87,590
FY 1966 Obligations	<u>66,503</u>
Unobligated Balance at June 30, 1966	\$ <u>21,087</u>

STATEMENT OF SOURCE AND STATUS OF RUPEE FUNDS CONTRIBUTED TO THE CRL
As of June 30, 1966

Research Agreement Fund	Contributions NIH	Interest	Total Receipts	Obligations & Expenditures	Uncommitted Balance
FY 1962	Rs. 533,755	3,537	537,292	44,285	
FY 1963	746,245	14,751	760,996	630,193	
FY 1964	773,619	11,688	785,307	1,105,562	
FY 1965	1,371,381	13,581	1,384,962	1,477,508	
FY 1966	1,956,000	38,641	1,994,641	1,816,710	
Total	Rs. <u>5,381,000</u>	<u>82,198</u>	<u>5,463,198</u>	<u>5,074,258</u>	<u>388,940</u>

General Operating Fund	Contributions GOP	NIH	Interest	Misc. Receipts	Total Receipts	Obligations & Expenditures	Transfers to Capital Reserve Fund	Uncommitted Balance
FY 1962	Rs. 210,000	105,000	790	-0-	315,790	83,266	162,523	
FY 1963	210,000	210,000	4,372	217	424,589	394,660	42,971	
FY 1964	210,000	210,000	3,041	-0-	423,041	448,459	13,878	
FY 1965	250,000	250,000	2,602	-0-	502,602	500,411	9,590	
FY 1966	275,000	275,000	8,291	-0-	558,291	549,520	9,328	
Total	Rs. <u>1,155,000</u>	<u>1,050,000</u>	<u>19,096</u>	<u>217</u>	<u>2,224,313</u>	<u>1,976,316</u>	<u>238,290</u>	<u>9,707</u>

Capital Reserve Fund	Contributions GOP	USAID	Transfers from General Operating Fund	Interest	Total Receipts	Obligations & Expenditures	Uncommitted Balance
FY 1962	Rs. 2,680	96,000	162,523	634	261,837	77,449	
FY 1963	-0-	(800)	42,971	3,826	45,997	42,281	
FY 1964	-0-	-0-	13,878	3,532	17,410	93,711	
FY 1965	-0-	-0-	9,590	1,623	11,213	21,247	
FY 1966	-0- 1/	96,000	9,328	1,292	106,620	139,788	
Total	Rs. <u>2,680</u>	<u>191,200</u>	<u>238,290</u>	<u>10,907</u>	<u>443,077</u>	<u>374,476</u>	<u>68,601</u>

1/ Matching GOP contribution of Rs. 96,000 made in August 1966 (and included in Exhibit E).

STATEMENTS OF INCOME AND EXPENDITURES - CRL RUPEE FUNDS
For the Fiscal Year Ended June 30, 1966 (Per CRL Records)

	<u>Research Agree- ment Fund</u>	<u>General Opera- ting Fund</u>	<u>Capital Re- serve Fund</u>	<u>Total Rupee Funds</u>
Balance, July 1, 1965	Rs. 211,010	Rs. 10,265	Rs. 101,770	Rs. 323,045
Income:				
Contribution by GOP for FY 1966	-0-	275,000	-0-	275,000
Contribution by NIH for FY 1966	1,956,000	275,000	-0-	2,231,000
Additional Contribution by USAID/Pakistan	-0-	-0-	96,000	96,000
Interest Earned on Fixed Deposits	<u>38,641</u>	<u>8,291</u>	<u>1,292</u>	<u>48,224</u>
Total Available	2,205,651	568,556	199,062	2,973,269
Expenses (see Schedule 1) 1/	<u>(1,816,710)</u>	<u>(549,520)</u>	<u>(139,788)</u>	<u>(2,506,018)</u>
Balance	388,941	19,036	59,274	467,251
Transferred to Capital Reserve Fund	<u>-0-</u>	<u>(9,328)</u>	<u>9,328</u>	<u>-0-</u>
Balance, June 30, 1966	Rs. <u>388,941</u>	Rs. <u>9,708</u>	Rs. <u>68,602</u>	Rs. <u>467,251</u>
Total Fund Balance at June 30, 1966 Represents:				
Cash				Rs. 484,413
Employees Advances				<u>15,460</u>
Subtotal				499,873
Less Outstanding obligations at 6/30/66				<u>32,622</u>
Balance				Rs. <u>467,251</u>

1/ CRL treats as expenses applicable to the fiscal year only those unliquidated obligations as of June 30, which are liquidated prior to September 30. Unliquidated obligations as of June 30, which are liquidated after September 30, are treated as expenditures of the following fiscal year. Since valid FY 1966 obligations not paid at September 30, 1966 were Rs. 28,485, and the FY 1965 carryover was Rs. 12,503, the expenditures as shown in Exhibit B and Schedule 1 of Exhibit C are under-stated as compared with accrual basis figures as follows:

<u>June 30 Obligations still unliquidated at September 30</u>	<u>1966</u>	<u>1965</u>	<u>NET</u>
General Operating Fund	Rs. 9,893	Rs. 10,618	Rs. (725)
Research Agreement Fund	<u>18,592</u>	<u>1,885</u>	<u>16,707</u>
Total	Rs. <u>28,485</u>	Rs. <u>12,503</u>	Rs. <u>15,982</u>

STATEMENT OF EXPENSES - CRL RUPEES FUNDS
For the Fiscal Year Ended June 30, 1966 (Per CRL Records)

EXHIBIT C
Schedule 1

	<u>Research Agree- ment Fund</u>	<u>General Opera- ting Fund</u>	<u>Capital Re- serve Fund</u>	<u>Total Rupee Funds</u>
PERSONAL SERVICES:				
Professional	Rs. 245,582	Rs. 24,673	Rs. -	Rs. 270,255
Technical and Supporting	830,262	354,602	-	1,184,864
Subtotal	<u>1,075,844</u>	<u>379,275</u>	-	<u>1,455,119</u>
TRAVEL AND TRANSPORTATION OF PERSONS:				
In Pakistan	95,804	1,202	-	97,006
Outside Pakistan	150,586	-	-	150,586
Consultants	139,453	12,023	-	151,476
Subtotal	<u>385,843</u>	<u>13,225</u>	-	<u>399,068</u>
TRANSPORTATION OF THINGS	11,060	8,076	-	19,136
RENT, COMMUNICATIONS AND UTILITIES:				
Rent	7,553	-	-	7,553
Communications	2,345	11,477	-	13,822
Subtotal	<u>9,898</u>	<u>11,477</u>	-	<u>21,375</u>
PRINTING AND REPRODUCTION	4,476	6,125	-	10,601
OTHER CONTRACTUAL SERVICES:				
Repairs	32,758	5,427	-	38,185
Other	39,066	13,868	-	52,934
Subtotal	<u>71,824</u>	<u>19,295</u>	-	<u>91,119</u>
SUPPLIES AND MATERIALS:				
Laboratory and Hospital	95,722	7,336	-	103,058
Office and Janitorial	8,320	16,358	-	24,678
Research and Animal Feed	5,595	9,473	-	15,068
Fuel	1,764	2,173	-	3,937
Hospital Food	37,377	27,392	-	64,769
Linens and Uniforms	7,963	7,709	-	15,672
Other	27,220	32,088	-	59,308
Subtotal	<u>183,961</u>	<u>102,529</u>	-	<u>286,490</u>
EQUIPMENT:				
Laboratory and Hospital	21,259	4,701	-	25,960
Transport	9,300	-	-	9,300
Office	38,335	3,809	-	42,144
Other	4,910	1,008	-	5,918
Subtotal	<u>73,804</u>	<u>9,518</u>	-	<u>83,322</u>
BUILDING AND BUILDING IMPROVEMENTS	-0-	-	139,788	139,788
Total Expenses (Exhibit B)	Rs. <u>1,816,710</u>	Rs. <u>549,520</u>	Rs. <u>139,788</u>	Rs. <u>2,506,018</u>

NOTE: Includes obligations of June 30, 1966 for which payments made by September 30, 1966 (see 1/ to Exhibit C).

USAID/PAKISTAN (CHOLERA RESEARCH LAB.)

COMPUTATION OF TRANSFERS FROM GENERAL OPERATING FUND TO CAPITAL RESERVE FUND
As of June 30, 1966

Year-End Balance (FY 1965) Attributable to NIH (See Exhibit C)	Rs. 10,265	
FY 1966 NIH Contribution (See Exhibit B)	<u>275,000</u>	Rs. 285,265
FY 1966 GOP Contribution (See Exhibit B)		<u>275,000</u>
Total Contributions		Rs. <u>560,265</u>
Percent of Contributions Attributable to GOP (Rs. 275,000/ Rs. 560,265)		(49%)
Balance of General Operating Fund at June 30, 1966, For Purpose of Computing Transfers (See Exhibit C)		Rs. <u>19,036</u>
Percent of Contributions Attributable to GOP		(49%)
Transferred to Capital Reserve Fund (See Exhibit C)		Rs. <u>9,328</u>

USAID TRUST FUND EXPENDITURES FOR THE
CHOLERA RESEARCH LABORATORY (CRL)
From August 16, 1961 (Inception) To June 30, 1966

<u>Period</u>	<u>Amount</u> <u>1/</u>
8/16/61 - 12/31/61	Rs. 117,879.51 <u>2/</u>
1/ 1/62 - 6/30/64	527,184.71
7/ 1/64 - 6/30/65	336,308.94
7/ 1/65 - 6/30/66	<u>448,904.37</u> <u>3/</u>
Total	Rs. <u>1,430,277.53</u>

- 1/ Consists of (a) direct USAID expenditures on behalf of the CRL, and
(b) USAID costs for CRL housing, utilities, equipment maintenance, etc.
- 2/ The bulk of these expenditures were for CRL's operational costs, including local salaries, furniture, and equipment. Such costs were also paid from Trust Funds up to January 1, 1962.
- 3/ Represents expenditures through January 31, 1967 against FY 1966 obligations, and excludes Rs. 53,093.94 of unliquidated FY 1966 obligations as of January 31, 1967.

CONTRIBUTIONS TO OR EXPENDITURES FOR THE CRL
Through June 30, 1966

EXHIBIT E

	Authorized	To NIH	For the CRL - Total Support			FY 1966 Portion of Total		
			U.S. \$	Rupees 5/	\$ or \$-Equiv.	U.S. \$	Rupees 4/	\$ or \$-Equiv.
<u>SEATO-AID-NIH CHOLERA RESEARCH FUND:</u>								
Other Contributions	\$ Unknown	\$ Unknown						
AID/Washington (Direct to NIH)	540,000	400,000						
USAID/Pakistan (Through AID/W)	381,400	381,400						
	\$ 921,400	\$ 781,400	\$ { 671,512 1/			\$ 220,724		\$ 220,724
			{ 166,000 2/			66,503		66,503
			837,512	-	\$ 837,512	287,227	-	287,227
<u>NIH U.S.-TECHNICIAN FUNDING:</u>								
NIH Appropriated Dollars			396,237 3/	-	396,237	80,000 3/		80,000
<u>NIH RESEARCH-AGREEMENT FUND:</u>								
NIH-Owned PL 480 Section 104(k) Rupees			-	Rs. 5,381,000	1,121,042	-	Rs. 1,956,000	407,500
<u>GOP-NIH GENERAL OPERATING FUND:</u>								
NIH-Owned PL 480 Section 104(k) Rupees			-	1,050,000	218,750	-	275,000	57,292
Government of Pakistan (GOP)			-	1,155,000	240,625	-	275,000	57,292
<u>GOP-USAID CAPITAL RESERVE FUND:</u>								
GOP-Owned Rupees			-	98,680	20,558	-	96,000	20,000
USAID-Owned PL 480 Section 104(e) Rupees			-	95,200	19,833	-	None	None
USAID-Owned PL 480 Section 402 (Mutual Security Act) Rupees			-	96,000	20,000	-	96,000	20,000
<u>UNITED KINGDOM:</u>								
£ Sterling (Total £ 52,000, FY 1966 £ 11,000)			145,600 4/	-	145,600	30,800 4/	-	30,800
<u>GOVERNMENT OF AUSTRALIA:</u>								
Technicians and Equipment			Unknown	-	Unknown	None	-	None
<u>LOGISTICAL SUPPORT:</u>								
GOP (Hospital, Laboratory, Buildings, Maintenance, & Utilities)			-	Unknown	Unknown	-	Unknown	Unknown
USAID Trust Funds (GOP-Owned, USAID-Controlled "Counterpart")			-	1,430,278	297,975	-	448,904	93,522
Total Identified			\$1,379,349	Rs. 9,306,158	\$3,318,132	\$398,027	Rs. 3,146,904	\$1,053,633

1/ NIH-controlled.

2/ CRL-controlled.

3/ NIH-controlled, not verified.

4/ Pounds sterling converted to dollars at rate of £ 1.00 to \$2.80.

5/ Rupees converted to dollars at rate of Rs. 4.80 to \$1.00

Distribution of Report

	<u>No. of Copies</u>
<u>USAID/P:</u>	
DD	1
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C/FCS	1
IGA/STATE	1
CRL	100
GOP (EAD)	10

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

Sixth Meeting of the

DIRECTING COUNCIL

Dacca, East Pakistan - March 8-9, 1967

PRESENTATION OF APPENDICES TO

PERSONNEL REGULATIONS

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

MEMORANDUM

August 8, 1966.

To : All PSRL Employees
From : Director, PSRL
Subject : Pay Increase and Adjustments

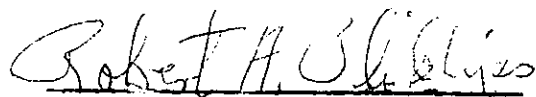
In view of the rising cost of living etc., salary increase of approximately 10% will be effective 1 July, 1966.

The pay-raise is built-in to the new pay-schedule enclosed herewith.

Each employee will be informed in writing his/her status in the new pay-schedule.

As will be seen in the new pay-schedule the anomalies in annual increments have been removed.

Employees at or above new grade-F are not entitled to overtime.



Robert A. Phillips, M.D.
Director.

CRL CIRCULARS

GENERAL ADMINISTRATION No. 1

20 August 1966.

TO : CRL Staff
FROM : The Director *R.A.P.*
SUBJECT : Issuance System for CRL Policies and Procedures

This Circular establishes and describes the system to be used for the issuing of policies and procedures and other items of management information that apply to the programs of CRL. Two types of issuance will be used; Circulars for policies, standards, and procedures which have continuing applicability and relevance, and Memoranda to disseminate information, requests, and announcements of a passing or one-time nature. Circulars and Memoranda will be issued over the signature of the Director or the Executive Officer.

CRL CIRCULARS

The following fourteen general categories of Circulars will be used initially to cover the entire management and program area, and Circulars will be numbered consecutively within these categories:

GENERAL ADMINISTRATION
ORGANIZATION AND FUNCTIONS
FINANCIAL MANAGEMENT
SUPPLY AND PROPERTY MANAGEMENT
CONTRACT MANAGEMENT
TRANSPORT MANAGEMENT
PERSONNEL MANAGEMENT
EMPLOYEE RELATIONS
TRAVEL, HOUSING AND P.R.
MAINTENANCE MANAGEMENT
GENERAL SERVICES
CORRESPONDENCE MANAGEMENT
TRAINING
PROGRAM POLICIES

New categories will be added to this list as they are needed.

As problems arise which require a uniform decision or interpretation, implementing policies and procedures will be published through this medium. As time permits, similar materials previously issued in memorandum form will be brought up to date and reissued in the Circular format. Loose leaf binders complete with dividers and copies of all Circulars will be distributed to supervisory personnel. Distribution of Circulars to non-supervisory personnel will be made on the basis of need.

CRL MEMORANDA

Memoranda should be retained by CRL personnel only as long as they are pertinent and should be disposed of after the required action has been taken. A master copy file of memoranda will be retained in the Executive Office for reference purposes for one year.

Suggestions of items for inclusion in the system will be welcomed and should be made in writing to the Administrative Officer, CRL.

20 August 1966

TO : CRL Staff
FROM : The Director *B.A.P.*
SUBJECT : Reorganization of Administrative and General Services Sections

Effective 15th August, 1966, the former Administrative and General Services Sections are combined into a single Administration Section. The new Section will consist of the following six Branches.

- Financial Management Branch
- Supply Management Branch
- Personnel Management Branch
- Transport Management Branch
- Equipment Maintenance Branch
- General Services Branch

The Administrative Officer, CRL will serve concurrently as the Chief, Administration Section, and as such will coordinate the work of the six branches.

Functional statements for the Administration Section and its branches follow.

ADMINISTRATION SECTION

Provides coordinated administrative and general services for the CRL and acts as liaison for the Laboratory in administrative matters involving other governmental and non-governmental agencies.

FINANCIAL MANAGEMENT BRANCH

Provides responsible financial management of the Laboratory's funds, maintains its accounts and fiscal records in accordance with applicable financial regulations, reviews disbursement requests for legality and propriety, and prepares disbursement documents. In collaboration with the Executive and Administrative Officers, prepares the budget for the Laboratory and related supporting documents. Maintains cost accounting records and prepares required fiscal reports.

SUPPLY MANAGEMENT BRANCH

Procures, warehouses, and issues supplies and equipment for the Laboratory, maintains appropriate property and stock control systems, conducts an annual inventory of non-expendable equipment and inventories of supplies as appropriate, but at least annually. Provides assistance to other branches of the Administration Section in the establishment of controls over the supplies and spares for which they are responsible.

PERSONNEL MANAGEMENT BRANCH

Recruits, tests, and hires local staff for the Laboratory in accordance with applicable regulations, prepares appropriate documents for personnel actions, and maintains personnel files and other related records. Makes travel

arrangements for Laboratory personnel, obtaining tickets, visas, permits, etc. Assists the Executive and Administrative Officers in obtaining and arranging for housing for non-Pakistani staff.

TRANSPORT MANAGEMENT BRANCH

Provides vehicular, launch, and speed boat transport for the Laboratory and its field installations, scheduling vehicles and launch trips, maintaining vehicles and boats or arranging for their maintenance through contract or other agreements, and maintaining records and making reports relating to usage and costs.

EQUIPMENT MAINTENANCE BRANCH

Maintains the equipment and instruments of the Laboratory in its shop and through contracts with local representatives of manufacturers, repairs or arranges for the repair of equipment and instruments, and cooperates with the other branches of the Administration Section on their maintenance problems.

GENERAL SERVICES BRANCH

Provides guard and cleaning service to the Laboratory, maintains the buildings and other structures occupied by the Laboratory and makes or arranges for necessary alterations, provides mail, filing, and communications services for the Laboratory.

SCHEDULE OF GRADES SHOWING MONTHLY PAY FOR PERSONNEL
OF THE PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

ANNUAL INCREMENTS

GRADE	1	2	3	4	5	6	7	8	9	10	Increment amount
A	2574	2699	2824	2949	3074	3199	3324	3449	3574	3699	125
B	1974	2094	2214	2334	2454	2574	2694	2814	2934	3054	120
C	1654	1734	1814	1894	1974	2054	2134	2214	2294	2374	80
D	1414	1474	1534	1594	1654	1714	1774	1834	1894	1954	60
E	1214	1264	1314	1364	1414	1464	1514	1564	1614	1664	50
F	1014	1064	1114	1164	1214	1264	1314	1364	1414	1464	50
G	854	894	934	974	1014	1054	1094	1134	1174	1214	40
H	654	694	734	774	814	854	894	934	974	1014	40
I	540	572	604	636	668	700	732	764	796	828	32
J	448	474	500	526	552	578	604	630	656	682	26
K	360	382	404	426	448	470	492	514	536	558	22
L	246	262	278	294	310	326	342	358	374	390	16
M	186	198	210	222	234	246	258	270	282	294	12
N	150	159	168	177	186	195	204	213	222	231	9
O	110	118	126	134	142	150	158	166	174	182	8

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

CRL MEMORANDUM

No. 10

November 3, 1966

TO : PSCRL employees
FROM : Director, PSCRL *RAG*
SUBJECT : Re-organisation of employees structure

Mr. Charles B. Myers who intensively dealt with the personnel problems of PSCRL suggested measures for removing the anomalous conditions prevailing here. Going through the personal files available with us, it appears that a lot of jobs have been created which have no basic bearing or relationship with the whole structure. Therefore, all jobs in PSCRL have been classified in a broad based but technical way keeping in view the revised pay structure. This will be effective immediately. Any adjustment arising out of this classification shall be effective 1 July, 1966. Each employee will be intimated in writing his/her position in the new classification and will also be told of their salary position.

JOBS CLASSIFIED

RANGE OF PAY

1. Section Chief/Guest Investigators	Grades D through A
2. Research Associates/Physicians	F through D
3. Senior Research Assistants	G through F
4. Research Assistants	I through G
5. Research Technicians	I
6. Laboratory Technicians	L through J
7. Sanitary Inspectors	K through J
8. Field Assistants	N through L
9. Laboratory Attendants	O through M
10. Boat Drivers	N through M
11. Nursing Services	K through I
(a) Senior staff nurse	I

.....continued.....

<u>JOBS CLASSIFIED</u> (Continued)	<u>RANGE OF PAY</u>
11.(b) Junior staff nurse	Grades J
(c) Aid nurse	L through K

Proper job descriptions for all classes of employees will be available soon and a copy would be passed over to each individual.

All Field Assistants in Matlab who have served for one year or above will immediately move to grade M and the rest of the group will move to the same grade on completion of a year's service.

All Boat Drivers in Matlab who have served more than a year will immediately move to grade M and rest will move to the same grade on completion of a year's service.

There will be further adjustments on employees who are currently on their proper grades in terms of the present memorandum and each one will be informed in writing about his/her position.

The system of random promotion is abolished forthwith. Henceforth this will be done once a year on the basis of availability of promotional space.

There will not be any more incentive awards effective the date of this memorandum.

Some sort of relief would be given to the Government deputed Personnel to PSCRL specially the Launch Crew.

A supplementary pay roll would be prepared by the Finance Management Branch and employees would be intimated in writing when the year payment would be made.

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PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

C I R C U L A R

No. 20

30 January, 1967

To : All PSCRL employees

From : Patrick G. Talmon, *P. Talmon*
Executive Officer, PSCRL

Subject : Reorganisation of employees structure.

This is in continuation of CRL Memorandum No. 10 dated November 3, 1966 classifying the remaining jobs in PSCRL which will be effective immediately. Any adjustment arising out of this classification shall be effective 1st July, 1966. Each employee will be intimated in writing his/her position in the new classification and will also be told of their salary position :

<u>JOBS CLASSIFIED</u>	<u>RANGE OF PAY</u>
12. Branch Heads/Specialists	Grade F through D
13. Secretaries	" G " F
14. Senior Administrative Assistant	" H " F
15. Administrative Assistant/Typist-Clerk/ Diet Clerk	" K " I
16. Statistical Assistant	" J " H
17. Telephone Operator	" K.
18. Driver/Mechanic-Helper/Tailor	" L.
19. Junior Assistant/Mechanic	" M through K
20. Mechanic/Despatcher/Head Darwan/ House Keeper	" L " I
21. Darwan/Sweeper/Messenger/Gardener/ Store Attendant/Cook Helper/Laundryman	" O " M
22. Cook	" N " L
23. Wardboy	" N " M

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

CRL MEMORANDUM

No. 9

November 3, 1966.

TO : All PSCRL employees
FROM : Director, PSCRL
SUBJECT : ANNUAL LEAVE

There has been a lot of misunderstanding in the interpretation of the particular paragraph of the personnel regulation. Henceforth an employee would be allowed to accumulate any number of hours as annual leave subject to the following conditions:

- (a) An employee may earn more than 360 hours of annual leave in a given leave year.
- (b) At the close of leave year an employee would be given the option either to carry over maximum 360 hours of annual leave to the next year or carry over 240 hours and cash 120 hours.
- (c) Rest of the leave over 360 hours will be credited to the sick leave account of the employee concerned.
- (d) In no case an employee would be allowed to carry over less than 240 hours if he/she has this much of leave to his/her credit at the close of a leave year.

All employees will give their option within a week of the receipt of leave account.

...

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

MEMORANDUM

No. 18

3 January, 1967

TO : ALL PSCRL EMPLOYEES
FROM : Robert A. Phillips *R.A.P.*
Director, PSCRL
SUBJECT: CHARGE ALLOWANCE

It has been observed that at times certain employees are required to perform the duties and responsibilities of others in prolonged absences in addition to their own jobs.

Since these extra-responsibilities call for additional work, some sort of remuneration should be there to compensate the person concerned.

Henceforth an extra-remuneration in the form of CHARGE ALLOWANCE shall be entitled to such persons holding the additional responsibilities provided he/she has worked for minimum 30(thirty) days. The allowance shall vary from Rs.100 to Rs.300 per month depending on the amount of responsibility and load of work. In any case, the final decision shall be with the Director or his designated authority.

This shall work retro-actively from 1 July, 1966.

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

MEMORANDUM

April 21, 1966.

TO: ALL CRL EMPLOYEES
FROM: EXECUTIVE OFFICER
SUBJECT: ON-CALL ALLOWANCE

It has been observed for a long time that certain employees are required at odd hours to attend to emergency work at the Laboratory. Since this infringes on the personal time of the employee concerned, it has been decided to pay an "On Call Allowance" in the amount of 15% of a day's salary for those individuals who are instructed to remain home on an "On Call" basis.

Section Chiefs will inform the Administrative Section as to which employees have been instructed to remain home "On Call".

This is in addition to the overtime pay the employee receives when actual work is performed at the laboratory.

The above procedure will be effective this date.


Robert E. Freise
Executive Officer.

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

Sixth Meeting of the

DIRECTING COUNCIL

Dacca, East Pakistan - March 8-9, 1967

REVIEW OF CRL BUDGET PLAN FOR 1967-68

DC 6/6.

PROPOSED CRL BUDGET
FISCAL YEAR 1968

July 1, 1967 to June 30, 1968

<u>HEADS OF ACCOUNTS:</u>	CRL Operating Fund Rupee	UK Fund Pound	NIH Research Agreement	
			Rupee	Dollar
	Rs.	£	Rs.	\$
1. <u>PERSONAL SERVICES:</u>	<u>512,000</u>	<u>5,500</u>	<u>2334,000</u>	<u>65,600</u>
Professional	45,000		350,000	
Technical & Supporting	467,000		1944,000	
Consultant	-		40,000	
2. <u>TRAVEL & TRANSPORTATION OF PERSONS:</u>	<u>20,000</u>	<u>250</u>	<u>655,000</u>	<u>5,500</u>
In Pakistan	5,000		250,000	
Outside Pakistan	1,000		155,000	
Consultant	14,000		250,000	
3. <u>TRANSPORTATION OF THINGS:</u>	<u>15,000</u>	<u>250</u>	<u>60,000</u>	<u>2,900</u>
Shipping & Clearance	15,000		60,000	
4. <u>RENT, COMMUNICATION & UTILITIES:</u>	<u>18,000</u>	-	<u>110,000</u>	<u>800</u>
Rent	3,000		99,000	
Communication	15,000		11,000	
5. <u>PRINTING & REPRODUCTION:</u>	<u>10,000</u>	-	<u>60,000</u>	-
6. <u>OTHER CONTRACTUAL SERVICES:</u>	<u>40,000</u>	-	<u>135,000</u>	<u>10,100</u>
Repair	25,000		70,000	
Other	15,000		65,000	
7. <u>SUPPLIES & MATERIALS:</u>	<u>120,000</u>	<u>2,000</u>	<u>328 000</u>	<u>6,600</u>
Laboratory & Hospital	30,000		138,000	
Office & Janitorial	25,000		27,500	
Research animal & feed	10,000		22,000	
Fuel	4,000		15,000	
Hospital Food	20,000		45,000	
Linen & Uniforms	10,000		27,000	
Educational	3,000		3,000	
Other	18,000		50,500	
8. <u>EQUIPMENT:</u>	<u>15,000</u>	<u>2,000</u>	<u>195,000</u>	<u>4,000</u>
Laboratory & Hospital	5,000		90,000	
Transport	-		60,000	
Office	5,000		25,000	
Books	-		3,000	
Other	5,000		17,000	
<u>TOTALS:</u>	<u>Rs. 750,000</u>	<u>£10,000</u>	<u>Rs. 3877,000</u>	<u>\$95,500</u>

JUSTIFICATION FOR PROPOSED BUDGET FOR
FISCAL YEAR 1968

As a result of a substantial increase in professional staff and the expansion of on-going research programs and the inauguration of new programs, combined with necessitated increases in supportive administrative services, transportation, supplies and equipment during the current fiscal year, it became necessary to revise the originally approved budget for FY 67 by a substantial amount. To illustrate the increase in research staff ; in FY 65 there were only five American investigators engaged in research whereas the number jumped to nine in Fiscal Year 66 and to eleven in FY 67. The present level of eleven American research investigators is expected to remain stable at the time of this writing, although this number may increase in the future. Therefore, please note that while the technical and other supportive staff increased substantially and proportionately to the more than doubling of the American research investigation personnel between FY 65 and FY 67, the budget increased relatively less, and did not, in any case, double.

Unbudgeted expenditures which are fully narrated in the justification for the second proposed revised budget for FY 67 have further increased operating expenses for the current year. The decision during the current year to increase the scope of the vaccine trial coverage from 60,000 to approximately 130,000 persons also increased expenditures in terms of added staff and supportive services.

The proposed CRL budget for FY 68 is based on the revised budget for FY 67 submitted February 4, 1967. More specifically, the proposed FY 68 budget is a continuation of the last revised FY 67 budget of projected estimations of necessary funds required to continue the present level of research with due allowance made for additional research protocols that are planned for the coming fiscal year. The proposed budget includes due allowance made for normal year to year increases in the operating cost of the CRL, such as increases in prices of supplies, equipment, contractual services, etc.

OPERATING FUND

All major increases in the Operating Fund can be viewed within the framework of the decision to expand the research staff and to expand current programs and to inaugurate new ones with the logical and consequential necessity to provide additional operational support.

Contd.....

Personal Services

This figure is based in part on the total salary cost of the projected payroll for FY 68 based on the present level of staff with allowance made for adding additional administrative supporting staff. Allowance is made also for estimated cost of overtime based on 10% of the basic payroll. Another cost increase allowance is made for payment of certain portion of employees' accumulated annual leave according to the laboratory's approved fixed formula. Yet another allowance is provided for estimated increases in salary adjustments, annual increments, promotions, charge allowance, etc.

Travel and Transportation of Persons

A small increase is requested to cover the additional expenses of the increased number of travelling staff within Pakistan.

Transportation of Things

To handle the increased movement of freight of supplies and equipment of projected expanding and new programs a small increase is necessary.

Rent, Communications and Utilities

The volume increase in communications, recent increases in postal rates, and the cost of an extra electrical power line are factors which will increase expenses in this category.

Printing & Reproduction

No increase is requested.

Other Contractual Services

An additional cost factor is the necessity to expand servicing and maintenance of U.K. cars. A substantial increase in locally procured spare parts is necessary because General Services does not stock them. Allowance is also provided for maintenance of the CRL building and the hospital wing at Matlab.

Supplies and Materials

A nominal increase is requested to cover the costs of increased volume of supplies necessary as a result of program expansion and increased staff.

Equipment

A substantial increase is necessary both for replacement of some furniture and replacement of animal cages as well as additional cages for the planned expansion of the animal colony.

NIH RESEARCH AGREEMENT

As with the Operating Fund, the major increases requested in the NIH Research Agreement are the result of the decision to increase the research and technical staff and the expansion of research programs. Please note that major increases occur under Personal Services and Equipment. Other budget line items all represent approximately increases of a nominal 10%. Again, as with the Operating Fund, major requests for increasing the budget are reflections of the decision to increase the staff and open up new programs of research, along with the consequential necessity for increased supporting services. The proposed increase in the dollar portion of the Research Agreement is a nominal overall 10% needed to cover the normal increase in the cost of doing business. Following is a breakdown by line item of the rupee portion of the Agreement.

Personal Services

In addition to the salary cost of the payroll, allowance is also made for the additional cost of (1) overtime, (2) estimated increases for payment of annual increments, promotions, and charge allowance, (3) allowance for contract personnel, (4) added technical support positions and (5) payment of the cost of annual leave according to leave regulations.

Travel and Transportation of Persons

Additional support is needed for several factors : (1) hire charges of country boats for Matlab, (2) extra travel to Chittagong for facilitating clearance of supplies and equipment, (3) occasional travel within Pakistan to procure supplies or equipment and (4) scientific staff travel for collection of specimens.

Transportation of Things

A nominal increase of 10% is requested to cover increased activities in shipping and clearance.

Rent, Communications and Utilities

A 10% increase is necessary for the increasing activities in this category.

-: (4) :-

Printing and Reproduction

A nominal 10% increase is requested to cover the proposed increased activities.

Other Contractual Services

With the increase in planned programs activities, a consequential increase in this category will also be necessary. Allowance is made to improve the present inadequate animal colony facilities.

Supplies and Materials

A nominal 10% increase is requested.

Equipment

In addition to the necessity to increase this line item due to the expansion of programs, it has become necessary to replace the launch loan to the CRL since it is no longer economically repairable.

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

UTILITY REPORT

DC 6/7

ADMINISTRATIVE SECTION REPORT

II. NEW BUILDINGS:

i) New Hospital at Matlab.

Plans for a new hospital to be constructed at Matlab were formulated during the period of the Directorship of Dr. Benenson. Land was acquired for this purpose but due to legal troubles, PSCRL did not take possession. Subsequently the Government of East Pakistan proposed to construct a Rural Health Centre at Matlab and PSCRL submitted plans to add a wing at CRL cost for use as a hospital, which was accepted. The wing cost to the Laboratory was Rs.83,541.00. The wing houses patients and an administrative office. The hospital was formally opened by Colonel S.A. Mallick, Director, Health Services, Government of East Pakistan on 31 July, 1966.

ii) Status Report on Additional Wing for the PSCRL (Feb.10, 1967)

Space has always been at a premium in this Laboratory, becoming especially acute during the current year with the expansion of ongoing programs and the inauguration of new ones. To illustrate the shortage of space, a large tent and bamboo house were erected and the garage was converted to shelter cholera patients during the current epidemic, because present ward space was originally designed only for 20 beds. Additional space is also required for new research programs and expansion of old ones. Proper storage of supplies and equipment is another acute problem for lack of adequate space.

Negotiations for an additional wing were started last year. The Government of East Pakistan has given its approval to build the additional wing subject to the approval of the Government Architect and Chief Engineer. Approximately one more month is required before final submission of the plans for the new wing is made to USAID, Dacca, for consideration and submission to AID/Washington with a request for funding.

ADMINISTRATIVE SECTION

III. PREVENTIVE MAINTENANCE REPORT

Providing adequate supportive maintenance to the Laboratory has been a continuing problem. Such factors as inadequate maintenance and staffing, non-availability of spare parts, substantial time delays between requisition and acquisition of spare parts, and inadequate and unstable power supply, etc. have been a constant source of frustration for any attempts for improving maintenance. Due to these difficulties, efforts to establish a "Safety Code" or a "Preventive Maintenance Schedule" have been hampered in the past.

However, as a result of the visit of Mr. Charles Myers, Management Analysis Officer from NIH last summer, the Administrative Section was completely reorganized and included the establishment of a separate Equipment Maintenance Branch in an effort to provide a more systematic supportive maintenance schedule for the Laboratory.

Job descriptions are now available for all Maintenance Branch personnel. The Branch is responsible for the maintenance of all Electronic and electro-mechanical instruments, electrical appliances, compressors, electrifications, plumbing, carpentry and various other jobs. Preventive maintenance work, such as battery checking and charging, greasing and oiling, insulation test, periodical operation test of electro-mechanical, electrical equipments, etc., is also a responsibility of this Branch. Security personnel are regularly instructed on how to face emergencies after working hours. Regular maintenance personnel on "Call Duty" are also available.

The following preventive maintenance schedule work is carried out periodically i.e. Daily, weekly, monthly or as often necessary:

- 1) Laboratory Instrument:- Checking, meter setting, tuning, battery checking.
- 2) Generator, Compressors:- Operating checking, oiling and greasing, belt inspection and cut-out checks, etc.
- 3) Electric Power Panel/Switch Gear, etc:- Insulation test, Safety device operation, over-load switch, cleaning and switch operation.
- 4) Battery chargers:- Battery charging, cleaning, refitting and charging, short test and greasing, etc.
- 5) Operation test of thermo-switch, Safety valves of incubators, hot plates, distillation plants, autoclaves, incinerator, hot baths, etc.

(more)

Preventive Maintenance Report

- 6) Refrigerator, Air Conditioner and Freezer cleaning, greasing, oiling, checking of over-load and thermo controls, etc.
 - 7) Centrifuges:- Operation check, cleaning, greasing and timer check.
 - 8) Plumbing and Sanitation:- Checking of water and drain line, gas line, water connection and reserve tanks etc.
 - 9) Building:- Checking of doors, windows, screens etc. and other alternation or repairing as requested.
 - 10) Jet Guns:- Operational check, autoclaving and oiling etc.
-

ADMINISTRATIVE SECTION

IV. ELECTRICAL POWER SUPPLY REPORT

This Laboratory derives its main source of electrical power from a sub-station in the Institute of Public Health area. This sub-station supplies all the power into the Institute including the CRL, plus the Animal House quarters of the East Pakistan Government, as well as the residential complex surrounding the Institute.

The special distribution line which supplies the CRL is rated at 200 amps. This being insufficient, the Laboratory has difficulties in power outage, sometimes occurring several times a day. Ultimately we were compelled to take up the matter with EFWAIDA and Dacca Electrical Supply Department. They readily responded to our problem with a temporary solution on the understanding that something on a permanent basis would be worked out. They arranged a temporary overhead power line complete with a 100 KVA transformer and installed it in front of the CRL. This was completed in May, 1966. All additional costs of this extra source of electrical power are being borne by the CRL. Purely on a temporary basis we transferred some lines from the old channels to the new power source circuit. Mention should be made that the old voltage regulator has been out of commission since the 10th December, 1966. It is being presently dismantled for local repair, GE being unable to give any assistance in its repair.

Since the addition of this new power line, there have been no power outage as a result of overloads. However, occasional outages occur due to external circumstances. During such outages cut-off of some of the heavy load equipment is necessary to facilitate restoration of the power supply. Otherwise power restoration becomes difficult due to the instantaneous heavy load burden when full power returns.

The present load at the FSCRL is divided as follows; the old line carries about 190 amps per phase and the new line just over 100 amps per phase. These figures were taken at peak load hours. It must be emphasized that the electrical load at the Laboratory is constantly increasing due to the expansion of ongoing programs and the addition of new ones.

Mr. Billie R. Myers, Head, Electrical Engineering Unit, NIH, visited the Laboratory in August, 1966 to investigate the Laboratory's electrical problems and came out with several recommendations as follows:

The following paragraphs deal with outlines for improving the electrical service for I.P.H. and CRL. Unless otherwise stated, the recommendations are in the order in which they should be accomplished, giving estimated cost, etc.:

1. Purchase and install a 500 KW diesel engine-driven generator. The existing load at the CRL is approximately 200 KVA. This size would support the present and future CRL activities. Purchase and install two automatic transfer switches. The initial installation would be accomplished as shown on Drawings No. 2 and No. 3. Later, after construction of a generator building, install and connect the new and existing generator as shown on Drawings No. 4 and No. 5. The existing 50 KVA generator would serve as a back-up unit for the most critical loads should the larger generator fail. The estimated cost for accomplishing the above installation is as follows:

Electrical power supply report

(1) 500 KW diesel engine generator and accessories	\$55,000.00
(2) 2 - 400 ampere transfer switches	6,000.00
(3) Construction of generator building	7,000.00
(4) Associated devices, wiring, etc.	7,000.00
Estimated Total	<u>\$75,000.00</u>

2. Purchase equipment and construct a new substation, together with the installation of all wiring to the various sections of I.P.H. and CRL, as outlined on Drawings No. 4 and No. 5. This scheme would provide 2 - 1,000 KVA transformers for serving all of the main clinical center, including CRL. Under normal conditions, one transformer would probably serve the entire load; however, should it be desired, the load could be split between the two transformers. Interlock features would prevent paralleling the two transformers. Two 11,000 volt primary feeders would serve the substation with the possibility of selecting only one of the feeders at any time for carrying the load. New secondary feeders would serve the various wings of the clinical center and CRL. The estimated cost for accomplishing the above installation is as follows:

(1) 2 - 1,000 KVA transformers	\$24,000.00
(2) Secondary switchboard	15,000.00
(3) High voltage switchgear	14,000.00
(4) Construction of substation building	12,000.00
(5) Secondary feeders	15,000.00
(6) Miscellaneous work (10%)	8,000.00
Estimated Total	<u>\$88,000.00</u>

3. Purchase and install a package engine-driven 30 KW generator for standby service for the smallpox vaccine manufacturing - \$ 5,000.00

4. Purchase and provide to CRL for replacement of the existing fuse panelboards four new panelboards complete with Code gauge steel cabinet, trim and hinged door with snap catch lock and two keys, all finished in gray enamel. The panelboard shall have 100 ampere main lugs only at the top and an insulated neutral bus at the bottom. The panelboard shall be constructed for 3 phase, 4 wire, 277Y/480 volts. The panelboards shall be equipped with bolted-on circuit breakers having A.I.C. of 10,000 and with the number of poles and trips as follows:

10 - 1P - 20A
 3 - 1p - 30A
 1 - 1p - 40A
 2 - 2p - 20A
 2 - 2p - 30A
 2 - 1p - 15A

Estimated cost \$ 1,200.00

5. Purchase and furnish as soon as possible to CRL a two-rate battery charger for maintaining the battery starting system for the existing 50 KVA engine-generator. The charger shall meet the following specifications:

- (1) 220 volt, 50 cycle input, 24 volt D.C. output
- (2) 6 ampere boost with mechanical equalizer timer
- (3) Trickle charge adjustable of either output for 2.17 volts per cell or for equalizer 2.33 volts per cell
- (4) Automatic line compensation
- (5) Automatic overload protection
- (6) Automatic D.C. voltage regulation
- (7) Silicon diode full wave rectifier
- (8) Automatic surge suppressors
- (9) Power failure relay with remote indicator connecting terminals
- (10) D.C. ammeter and voltmeter with 50 millivolt movement
- (11) Fused A.C. input and D.C. output

The manufacture of such a charger is LaMarche Manufacturing Co., Model A-11. The distributor of this product is Air Products & Chemicals, Inc., 2900 - 52nd Avenue, Hyattsville, Maryland. The estimated cost is \$265.00.

6. Install a continuous grounding conductor to all distribution equipment, including metal raceways and armor of feeder cables in CRL. The size of grounding conductor should not be less than No. 4 AWG composed of 98 percent hard drawn copper. The grounding conductor should originate from a positive ground counterpoise. The incoming water main may be acceptable if adequate grounding result is available. The estimated cost is \$400.00.

The complete report of Mr. Billie Myers was submitted to USAID, Dacca in January, 1967 for consideration and submission to AID/Washington along with USAID's final recommendations for the equipment necessary to provide CRL with a dependable source of regular and emergency electrical power for the present building and new wing as well as for the steam generator presently being installed, and the animal house.

ADMINISTRATIVE SECTION

V. STATUS REPORT ON STEAM GENERATOR.

The need for a steam generating plant as an alternative source of power to provide a dependable source of energy to operate the various equipment in the CRL has been a constant problem since the inception of the Laboratory. This problem has become increasingly acute with the expansion of ongoing research programs and the inauguration of new ones, with the consequential increased used of stills and autoclaves dependent solely on electrical power.

However, during the course of the past few months several developments occurred which hopefully will bring the CRL very close to the time when a steam generating plant will become fully operational and will be able to provide the PSCRL as well as the Institute of Public Health with a dependable source of demineralized water and steam for autoclaves, stills, and a hot water supply.

The CRL was fortunate enough to locate a brand-new Clayton Steam generator in the Institute of Public Health. This plant had been in storage for several years, but had never been used because it lacked a feed water system. The necessary accessories were ordered from Clayton by the CRL and have been received. A contract was negotiated in January, 1967 with Chemical and Engineering Constructions, an engineering firm located in Dacca, to provide certain auxiliary components and to install the whole system. Therefore, in the near future, the CRL will hopefully be able to enjoy an adequate alternative source of power.

Kendrick Hare
Deputy Director.

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

CLINICAL INVESTIGATION COMMITTEE

DC 6/8

MEMORANDUM

29 November 1966

To : Dr. John R. Seal
Chairman, Cholera Advisory Committee

From : R. A. Phillips, M.D.
Director

Subject : CLINICAL INVESTIGATION COMMITTEE; meeting of;
Pakistan-SEATO Cholera Research Laboratory; 26 November 1966.

Enclosures:-

- 1) Agenda
- 2) List of Committee Members
- 3) Recommendations of the Committee members in attendance.

This was the first meeting of the Committee to review the Laboratory's research proposals from the standpoint of the ethics and morals of human experimentation. Enclosure 1, 2 and 3 are forwarded for your information. The research proposals and the recommendations of the Committee members in attendance will be circulated to all members of the Committee and the results of this mail vote will be forwarded to you for appropriate action.

MEETING OF PSCL CLINICAL INVESTIGATION COMMITTEE

Enclosure 2. Members of the Committee

* Dr. D. A. K. Black
Chairman of the Department of Medicine
University of Manchester
England

Dr. Nazir Ahmed
Dean
Institute of Hygiene and
Public Health
Lahore

* Dr. Carl V. Moore
Chairman of the Department of Medicine
Washington University
St. Louis

* Lt. Col. S. M. H. Bokhari
Project Director
National Health Laboratories
Chaklala
West Pakistan

Dr. Stanley Bradley
Chairman of the Department of Medicine
Columbia University
New York

* Dr. A. K. Shamsuddin Ahmed
Professor of Medicine
Dacca University
Dacca

Dr. Graham Bull
Director of Clinical Research Center
Medical Research Council
London

* - In attendance.

MEETING OF PSCL CLINICAL INVESTIGATION COMMITTEE

... Enclosure 3.

* ITEM 1

(* numbering identical to that on enclosure 1 - 1 Agenda)

It was the feeling of the Committee in attendance that human experimentation in diseases such as cholera where the disease processes are still not completely known and in which a proven animal model is not available justified appropriate experiments delineated to discern the disease mechanisms to improve therapy and to enhance knowledge of means of preventing the disease.

It was pointed out to the Committee that an overwhelming majority of the patients were illiterate and if they were below the age of consent their parents were illiterate. This made it impossible to obtain informed consent for proposed studies in well over 99% of the patients. The Pakistani members of the Committee agreed that all patients or parents of patients would readily put a mark on a piece of paper acquiescing to experiments but they would have no appreciation of what might or might not be done. In consequence the Committee went on record to the effect that responsibility for experiments rested directly on the Director of the laboratory and his Deputy Director. The committee further went on record that the establishment of such a Committee who would be consulted from time to time on changes in experimental design would probably be an acceptable legal device but it did not absolve the Directorship of the Laboratory from its responsibilities.

ITEM 2:

The research protocols listed in this item on the agenda were reviewed by the Committee from the standpoint of "human experimentation" in its broadest aspects. No attention was paid in the formal Committee meeting to laboratory procedures.

The Director pointed out that it was the general policy of the laboratory to use only procedures which had been well documented by use in University hospitals throughout the world. The Director further informed the Committee that in instances in which a procedure whose safety had not been documented the Committee would be circularized with the proposal and a mail vote taken.

The Committee approved the procedures in experimental design in so far as the techniques involving human subjects, with the following observations:-

(Cont'd ... Enclo-3)

Protocol Number 22

"Demonstration of abnormal permeability in human cholera"

(Dr. GERAL KEUSCH).

Because of the incidence of anaphylactic reactions in the more common instances of hypertensive reactions following the administration of iron dextran intravenously, the committee felt it would prefer not to give approval to a project in which iron dextran was to be given intravenously. It is recommended rather than a safer molecule be found which could be identified in the tissues, than iron dextran itself.

Protocol Number 15

"The effect of hyperimmune plasma on the clinical course of acute cholera".

(David B. SACHAR, and ZAHIDUL HOQUE).

It was felt by the Committee that the passing of perimmune convalescent plasma from individual patients was a safe procedure since patients are to be given gamma globulin one week and one month following administration of the hyperimmune plasma.

The Director of the laboratory told the Committee that visitors to the laboratory the previous week, Dr. Elvin Kabat and Dr. Howard Goodman, W H O consultants in immunology, had suggested that an alternative procedure would be to use pooled convalescent sera which had been processed to remove the gamma globulin fraction. During the process any hepatitis virus would be destroyed. The Committee agreed that this would be a safe procedure but the Committee went on record as believing that the use of the whole convalescent sera should be studied and results compared with the specific administration of gamma globulin from convalescent sera.

PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY

TECHNICAL COMMITTEE MEETING
14 - 16 February 1967.

Research Protocols submitted to Clinical Investigation Committee at its meeting on 26 November, 1966.

EPIDEMIOLOGY STUDIES:

1. Cholera Vaccine Field Trials. (W. H. Mosley, M.D.).
2. The Effect of Cholera Vaccination on the Course of Clinical Cholera. (W.M. McCormack, M.D., W.H. Mosley, M.D. & Dr.M.Rahman)
3. Serologic Survey for cholera antibody in an American population living abroad. (W.M. McCormack, M.D.).
4. A Comparison of the Serological Response of Cholera Vaccine in man with the Potency determined by the Mouse Protection Assay. (W.H. Mosley, M.D., in collaboration with Dr.J. Feeley & Dr. M. Pittman).
5. Serologic Studies with Cholera Vaccine. (Drs. W.M.McCormack, Ranjit K. Barui, Ansaruddin Ahmed & W.H. Mosley).
6. Immunochemical Studies of Antibodies in Cholera. (W.H. Mosley, MD Dr. Ansaruddin Ahmed, Mr. Samin Ahmed & Dr. Paul Crabbé).
7. Rayer Bazar Community Study. (W.H. Mosley, M.D.).
8. Rayer Bazar Infant Study. (W.H. Mosley, M.D.).

CLINICAL STUDIES:

9. Protocol for oral glucose and Electrolyte Therapy in Cholera. (Drs. N. Hirschhorn, Taylor, Sachar).
10. Intestinal Electrolyte and Water Fluxes and Transmucosal Potentials in acute cholera. (Dr. J.O. Taylor & Dr. D. Sachar).
11. A Technique for the Measurement of Transmural Electric Potential in the Intact human Intestine. (David B. Sachar, M.D. & J.R.Saha).
12. Tetracycline Lavage Study. (R. Northrup, M.D.).
13. Antibiotic Study. (Dr. A.W. Karchmer & Dr. George Curlin).
14. Cathartic Purgation of Convalescent Cholera Patients (Dr. N. Hirschhorn, Dr. Mojid Mollah & CRL Ward Staff).
15. The Effect of Hyperimmune Plasma on the Clinical Course of Acute Cholera (David B. Sachar, M.D. & Z. Hoque, M.B.B.S.).
16. Therapy of Acute Cholera with Bacteriophage. (Dr. K.A. Monsur & N.. Hirschhorn, M.D.).
17. Bile Salts and Bile Pigments in Rice Water Stool. (Drs. Irvin H. Rosenberg & Norbert Hirschhorn.)

(more)

CLINICAL STUDIES: (Cont'd).

18. A Study of Intracellular and Extracellular Composition Changes During the Initial Therapy of Acute Cholera. (Drs. Northrup, J. Kinzie & M. Rahman).
19. Experimental Cholera in Monkeys. (Mr. Iqbalul Hasan).
20. Autoradiographical Study of Intestinal Permeability in Acute and Convalescent Cholera Patients. (Drs. J. Kinzie, R. Northrup & A. Abraham).
21. Suggested Protocol for the study of enteric biopsies from cholera patients with the electron microscope. (Dr. Andrew Abraham).
22. Demonstration of Abnormal Permeability in Human Cholera. (Dr. Gerald Keusch).
23. Report on Clinical Laboratory Section. (Mr. S. Z. Ahmad).

BACTERIOLOGY STUDIES:

24. Tetracycline action against V. cholerae in vitro. (R. Northrup, Mr. M. I. Huq & R. Rahman).
25. Relationship of Growth cycle of Vibrio Cholerae to production of " Skin toxin". (Mr. S.I. Hasan & M.I. Huq).
26. A Study of Resistance of V. Cholerae to Various Antimicrobial agents. (R. Rahman, P.K. B. Neogy, & M.I. Huq).
27. Comparison of the Division time of non Agglutinable vibrios with aeromonas, pseudomonas and commomonas and also with a standard vibrio culture. (R. Rahman & M.I. Huq).
28. Study on Cholera Phages. Phage typing of all the V. Cholerae isolated in the Lab. by using Routine Test Dilution method of Typing. (Mrs. A. Alam, Mr. M.I. Huq).
29. Study on Cholera Phages. Routine Survey for the detection of Cholera Phage from Patients with Vibrio and also non Vibrio diarrhoea. (Mrs. A. Alam & Mr. M.I. Huq).
30. Sensitivity patterns of the pathogenic members of the enterobacteriaceae group with special reference to salmonella, shigella and path. E. coli isolated. (P.K.B. Neogy & M.I. Huq).
31. Study of the Pathogenic Escherichia coli in children suffering from gastroenteritis in the study area Dacca City and Suburbs. (G. Kibriya, W.U. Ahmed & M.I. Huq).
32. Effectiveness of Enteropathogenic E. Coli in causing diarrhoea: Gut inflammation by loop technique in suckling rabbits. (R. Rahman & M.I. Huq).

(more)

BACTERIOLOGY STUDIES: (Cont'd)

33. Staphylococcus enteritis: A survey of Staphylococcus in the stools of diarrhoea patients and normal persons. (G. Kibriya, W.U. Ahmed & M.I. Huq).
34. Effectiveness of using higher incubation temperature for selenite broth for the isolation of salmonella. (G. Kibria, W.U. Ahmed & M. I. Huq).
35. To compare the effectiveness of Japanese manufactured TCBS Media with TTGA (Monsurs) & GA (Goodner) Media used for routine isolation in CRL. (G. Kibryia, W.U. Ahmed & M.I. Huq).

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PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY
DACCA, EAST PAKISTAN

Minutes of the 6th Meeting of the Directing Council

The sixth meeting of the Directing Council of the Pakistan-SEATO Cholera Research Laboratory was held in Dacca on 8 and 9 March, 1967.

The designated members of the Council were:

Colonel S. A. Mallick
Chairman.

Director of Health Services,
Government of East Pakistan,
Dacca.

(Representing the Government of
Pakistan).

Dr. Willard Boynton
Vice-Chairman

Senior Public Health Officer
US/AID Pakistan, Lahore.

(Representing the Government of
the U.S.A.)

Professor Robert Cruickshank

Department of Social and Preventive
Medicine, University of the
West Indies, Jamaica.

(Representing the Government of
the U.K.)

Dr. Robert S. Gordon

Clinical Director, NIAMD
National Institutes of Health,
Bethesda, Maryland, U.S.A.

(Representing the Director of the
National Institutes of Health).

Mr. David A. Wraight

Deputy Secretary General
SEATO, Bangkok,
Thailand.

(Representing the Secretary-
General of SEATO).

In attendance at the meeting were:

Dr. Jean F. Rogier	Chief Public Health Advisor US/AID, Dacca.
Mr. Louis Sekutowitz	Consul General for France East Pakistan.
Dr. Robert A. Phillips	Director, Pakistan-SEATO Cholera Research Laboratory.
Dr. Kendrick W. Hare	Deputy Director, Pakistan-SEATO Cholera Research Laboratory.
Mr. Patrick G. Talmon	Executive Officer, Pakistan-SEATO Cholera Research Lab.
Section Chiefs	Pakistan-SEATO Cholera Research Lab.

The Meeting was called to order by the Chairman at 0915.

ITEM 1: ADOPTION OF THE PROPOSED AGENDA.

The proposed agenda was presented and adopted.

ITEM 2: CONFIRMATION OF THE MINUTES OF THE FIFTH MEETING OF
THE DIRECTING COUNCIL HELD ON 9-10 MARCH, 1966.

The Minutes were reviewed and approved.

At this time the Meeting adjourned and the group was conducted around the Laboratory by the Director.

ITEM 3: THE REPORT OF THE TECHNICAL COMMITTEE. DC 6/1.

The Directing Council, having considered in detail the report of the Technical Committee, adopted the report and fully endorsed its recommendations.

The Council recorded its appreciation of the efforts of the staff, particularly the Sister in charge, and nursing staff, for their outstanding efforts during the 1966 cholera epidemic in Dacca, when 2,225 patients were admitted, and over 99% were cured.

The Directing Council agreed with the recommendations of the Technical Committee that the CRL play an active role in teaching modern methods of cholera control and treatment to health personnel from other areas, and in providing expert consultation when requested. It agreed that technical personnel on short-term assignments to CRL may provide a useful service in assisting with on-going research activities while at the same time receiving valuable training and experience.

The Council endorsed the recommendation of the Technical Committee for a ten-year planned program of continued research at PSCRL. The possibility of developing a more acceptable and more effective cholera vaccine would justify such a commitment. There are, in addition, many promising avenues for research on therapy, epidemiology and other aspects.

The Directing Council took special note of the recommendations of the Technical Committee regarding the renovation and reorganization of the Bacteriology Section, increased animal facilities, and early improvements to the animal house, and endorsed these recommendations.

ITEM 4: THE DIRECTOR'S ADMINISTRATIVE REPORT. DC 6/2.

The Directing Council took particular note of the significant increase in personnel (352 at 31.1.1966 to 541 at 31.1.1967) and of the effect that the development of essential facilities as well as the increase in staff has had upon the budget.

The Council noted the critical state of the transport fleet - of the sixteen vehicles owned by the Laboratory only two have not exceeded 37,000 miles - and regarded the early replacement of the majority of the vehicles as a matter of urgency. The Council decided to seek the good offices of SEATO in an endeavor to obtain gifts of replacement vehicles, and of the Government of Pakistan in facilitating the customs clearance of vehicles and spare parts.

ITEM 5: THE DIRECTOR'S FINANCIAL REPORT. DC 6/3.

The Directing Council noted and accepted the report as submitted.

ITEM 6: REVIEW OF THE AUDITORS' REPORT WITH THE DIRECTOR'S COMMENTS. DC 6/4.

The Directing Council noted that an investigation is being conducted into the supply of fuel, oil and grease to the hospital launch, "Joseph E. Smadel" and that a report will be furnished to US/AID and will be considered at the next meeting of the Directing Council.

In accepting the Report of the Audit, the Directing Council referred to the help of US/AID in conducting this audit which was considered essential to the correct operation of the PSCL. It recorded its appreciation of US/AID's assistance and trusts that AID will continue to provide this support.

ITEM 7: PRESENTATION OF APPENDICES TO PERSONNEL REGULATIONS. DC 6/5

The Directing Council accepted the recommendations of job classifications and ranges of pay in all sections except those of the Administrative Section which have not had final review. The Directing Council urged the Director to provide final job classifications and ranges of pay in the Administrative Section in the early future.

ITEM 8: REVIEW OF THE PSCL BUDGET PLAN FOR 1967-68 AND DETERMINATION OF THE LEVEL OF THE GENERAL OPERATING FUND. DC 6/6

The Directing Council reviewed the FY68 budget proposal and noted that the increase was 20% over the revised budget for FY67. The Council concurred in the proposed budget of Rs.750,000, subject to review by the respective governments.

The Council took note of the original Agreement, by which the Governments of East Pakistan and United States contributed equally to the PSCL operating fund. It observed that the present situation, by which all cholera suspects in the Dacca area are admitted to the wards of the laboratory, has made possible the closing of the cholera ward at Mitford Hospital, utilization of that space for other purposes and possibly in other savings to the GOEP. The Council hoped that the GOEP might therefore find it possible to make a special contribution of Rs.50,000 to be budgeted for patient care expenses at PSCL.

In view of the general increase in the cost of goods and services and of the expanding program, it recommended that each Government contribute Rs.350,000 toward the general operating fund.

ITEM 9: UTILITY REPORT. DC 6/7

The Directing Council noted with satisfaction that additional facilities for patient care have been completed at Matlab Bazar. Added clinical facilities in Dacca, recommended by the Directing Council at its fifth meeting, and again by the Technical Committee in 1967, are being planned. The Directing Council was informed that the GOEP has long range plans for the construction of an Infectious Diseases hospital in Mohakhali that will complement the clinical facilities of the PSCRL in the care of cholera patients.

The maintenance report was noted. The Directing Council was informed that NIH plans to assign to PSCRL a competent engineer to supervise maintenance activities.

The Directing Council was informed that plans for improving the electric supply to PSCRL, recommended at its fifth meeting, are progressing. Implementation of the plans will begin when NIH and USAID have agreed on the details.

The Directing Council was pleased to note that a steam generator is now available for service to both the Institute of Public Health and PSCRL. This will facilitate the reorganization of bacteriologic facilities recommended by the Technical Committee at its sixth meeting, and result in a considerable saving in electric power requirements.

ITEM 10: CLINICAL INVESTIGATION COMMITTEE. DC 6/8.

The Directing Council noted the formation of a Clinical Investigation Committee recommended at its fifth meeting, and received with satisfaction the Committee's first report.

ITEM 11: EXTENSION OF US/AID-GOP AGREEMENT. DC 6/9.

The Directing Council was informed that a three-year extension of the Agreement between GOP and US/AID had been signed by US/AID and agreed to in principle by the GOP. Final action is expected in the near future. The Council reaffirmed its endorsement of the Technical Committee's recommendation that the overall program be envisaged for at least ten more years.

ITEM 12: ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR THE ENSUING YEAR. DC 6/10.

The Directing Council unanimously re-elected Colonel S. A. Mallick, the delegate of the Government of Pakistan, to serve as Chairman, and Dr. Willard Boynton, the delegate of the U.S. Government, to serve as Vice-Chairman for an additional year.

ITEM 13: DATES FOR THE 7TH MEETING OF THE DIRECTING COUNCIL. DC 6/11.

Having endorsed the recommendations of the Technical Committee with respect to dates of future meetings, the Directing Council determined that its 7th meeting should occur on or about 15 January 1968. The exact dates will be fixed by the Chairman and the Director of PSCRL.

ITEM 14: OTHER BUSINESS. DC 6/12

1) Foreign Training of PSCRL Staff.

The Directing Council supported a recommendation by the Technical Committee and the Director of PSCRL that PSCRL funds shall not be allocated for sending staff overseas for postgraduate or technical training leading to higher degrees or diplomas since funds from other sources are available for such purposes. Financial help could, however, be available for travel costs to such staff members where necessary.

2) Secondment of Doctors and Nurses.

The Directing Council took note of the difficulties which arose in obtaining staff and recommended that the GOEP should give consideration to seconding doctors and nurses to meet the needs of the PSCRL.

3) Visiting Experts.

The Directing Council recorded its appreciation of visits from WHO experts and recommended the GOP to continue to sponsor such visits.

4) CENTO/SEATO Collaboration.

In the Summer of 1966 at a CENTO Conference held in Ankara, Brigadier M.S. Haque invited member nations to send Public Health Personnel to PSCRL for training in the management of cholera. As a result of this invitation, a CENTO sponsored program was set up whereby twenty-four Turkish and twenty-four Iranian health officials attended five-day training courses at the Laboratory in groups of approximately 12 doctors per group. Despite the extra load this has placed on the scientific staff of the Laboratory, the Director assured the Directing Council that the staff was happy to collaborate in such ventures in the future. The Council approved the continuation of such programs providing that no undue burden was placed on the Laboratory and its staff.

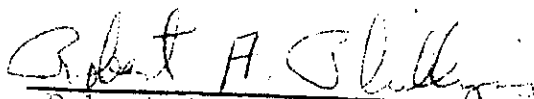
5) General Resolutions.

The Directing Council noted that contributions towards research by the United States were being continued at a high level and that while contributions in cash and kind were continuing from United Kingdom and Australia, it recommended that other SEATO member nations, particularly those interested in research into tropical diseases should endeavor also to contribute. It also recommended that the contribution from the United Kingdom like those from the Government of Pakistan and the United States, should be increased proportionately.

The Directing Council was informed that the GOEP had given permission for use of land for the erection of an additional wing to the Laboratory buildings. Plans and cost estimates are being prepared for submission to the appropriate authorities.

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The meeting adjourned at 1600 hrs. on 9 March, 1967.



Robert A. Phillips, M.D.
Director, PSCRL.



Colonel S. A. Mallick
Chairman.