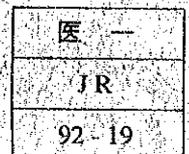


フィリピン共和国  
熱帯医学研究所プロジェクト  
アフターケア調査団報告書

1992年5月

国際協力事業団





フィリピン共和国  
熱帯医学研究所プロジェクト  
アフターケア調査団報告書

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## 序 文

フィリピン共和国熱帯医学研究所プロジェクトは、同国保健省熱帯医学研究所（Research Institute for Tropical Medicine : RITM）における熱帯病研究の水準向上と、これに従事するマンパワーの育成を通じ、同国を含む熱帯地方における主要熱帯病の抑制に貢献することを目的として、昭和55年10月から5年間実施され、その後、さらに昭和63年3月31日まで約2年半協力期間を延長し、計7年半にわたり実施された。

プロジェクト終了後、約4年間が経過しているが、プロジェクトのその後の推移ならびに研究活動の現状を調査し、補完的協力の必要性、および可能性を検討することを目的として、当事業団は、平成4年3月23日より3月28日まで、斎藤厚琉球大学医学部第一内科教授を団長とするアフターケア調査団を派遣した。

本報告書は、同調査団の調査結果をとりまとめたものである。

ここに、本件調査に当たりご協力いただいた関係各位に対し深甚なる謝意を表わすとともに、今後とも本件技術協力の成功のために、一層のご努力をお願いする次第である。

平成4年5月

国際協力事業団  
理事 西野 世界



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## 1. アフターケア調査団の派遣

### 1-1. 調査団派遣の経緯と目的

フィリピン共和国熱帯医学研究所プロジェクト（以下プロジェクトと略）は、同国保健省熱帯医学研究所（Research Institute for Tropical Medicine: RITM）における熱帯病研究の水準向上と、これに従事するマンパワーの育成を通じ、同国を含む熱帯地方における主要熱帯病の抑制に貢献することを目的として、昭和55年10月から5年間実施され、その後、さらに昭和63年3月31日まで約2年半協力期間を延長し、計7年半にわたり実施された。

本プロジェクト協力期間中に行われた主な活動は以下のとおりである。

- (1) 呼吸器疾患およびジフテリア・破傷風・百日咳（DPT）に対する免疫学、細菌学、疫学的研究
- (2) 下痢症疾患の細菌学、疫学的研究
- (3) 臨床診断技術の向上と疫学的データの収集、解析
- (4) 医昆虫学、特に蚊の分類、生態学および住血吸虫症など寄生虫性疾患の研究
- (5) HB型肝炎診断試薬の自作
- (6) 実験動物の飼育とその応用

その結果、ARI、下痢症、HIV、マラリア、EPI対象疾患等、各種感染症の病原診断精度の向上と、病態生理のより正確な把握に、顕著な成果をおさめた。

プロジェクトの終了後、約4年間が経過しているが、同研究所の現状を把握した上で、7年半のプロジェクト協力期間中に、先方カウンターパートに移転された熱帯病に係る研究技術の再活性化、ならびに同研究所の研究活動のさらなる発展を図るためアフターケア協力を実施することとし、その内容について先方と協議するため、今般本調査団を派遣することとした。

### 1-2. 調査団の構成

| 担当業務  | 氏名                             | 現職                |
|-------|--------------------------------|-------------------|
| 団長・総括 | 齋藤 厚 <small>さいとう あつし</small>   | 琉球大学医学部第一内科教授     |
| ウイルス学 | 牧野 芳大 <small>まきの よしひろ</small>  | 琉球大学医学部ウイルス学教室助教授 |
| 技術協力  | 齋藤 雅治 <small>さいとう まさあち</small> | 国際協力事業団医療協力課      |

1-3. 調査日程および調査概要

| 日順 | 月 日   | 曜 | 調 査 概 要  |
|----|-------|---|--|
| 1  | 3月23日 | 月 | 移動 東京発JL-741 マニラ着<br>JICA事務所訪問<br>飯島所長に調査方針説明、大川所員と打ち合わせ<br>在比日本大使館表敬 柏樹書記官に調査方針説明   |
| 2  | 3月24日 | 火 | 保健省訪問 Dr. Linda Milan<br>Director, Foreign Assistance Coordination Service<br>調査方針説明<br>国家経済開発庁(National Economic Development Authority:<br>NEDA)訪問 Mr.Eugenio B. Inocentes III Chief,<br>Program-Financing Division<br>調査方針説明<br>熱帯医学研究所(RITM)訪問<br>Dr. Mary Ann Lansang 副所長<br>質問票に対し先方より提出された回答、および先方のプロポーザル<br>について討議、協力のスキームを説明 |
| 3  | 3月25日 | 水 | RITM<br>各部門のプロポーザルに係る発表・意見交換<br>機材予算ならびに短期専門家人数枠内に納めるべく、各部門間の調<br>整を依頼<br>所内各部署の見学   |
| 4  | 3月26日 | 木 | RITM<br>調整済のプロポーザルを聴取<br>Lansang 副所長と齋藤団長との間で協力内容に係る協議議事録<br>(ミニッツ) 署名<br>関連施設見学 (1) サン・ラザロ病院  |
| 5  | 3月27日 | 金 | 関連施設見学 (2) マカティ・メディカルセンター<br>JICA事務所報告<br>飯島所長・大川所員に調査結果報告   |
| 6  | 3月28日 | 土 | 移動<br>(齋藤団長・牧野団員)<br>マニラ発PR-300 香港経由 JL-758 沖縄着<br>(齋藤団員)<br>マニラ発JL-742 東京着  |

#### 1-4. 主要面談者

##### 1-4-1. フィリピン側

保健省 (DOH)

Dr. Linda Milan

Director, Foreign Assistance

Coordination Service

国家経済開発庁 (NEDA)

Mr. Eugenio B. Inocentes III

Chief, Program-Financing Division

熱帯医学研究所 (RITM)

Dr. Mary Ann Lansang

Assistant Director

Dr. Remigio Olveda

Chief, Research & Training Division

Mrs. Minerva G. Tarrayo

Chief, Administrative Division

Mrs. Salud Zaldivar

Chief, Paramedical Division

Dr. Xerxes Navarro

Head, Clinical Department

Dr. Rosario Capeding

Head, Department of Microbiology

Dr. Bernadette Ramirez

Head, Department of Immunology

Dr. Noel Miranda

Head, Animal Research Laboratory

Ms. Cielo Pasay

OIC, Parasitology & Medical Entomology  
Department

Dr. Florencio Dizon

OIC, Department of Pathology

Ms. Fem Julia Paladin

Head, Virology Section

(Engr. Proceso Ramos

Proprietor, PP Ramos Manpower Services)

Engr. Nolan Vicente

Biomedical Engineer

Mr. Noli Manalo

Public Relation Officer

Ms. Didith Averilla

Executive Assistant, Director's Office

##### 1-4-2. 日本側

在フィリピン日本国大使館

柏 樹 悦 郎 一等書記官

JICAフィリピン事務所

飯 島 正 孝 所長

大 川 晴 美 所員

## 1-5. 調査項目

1. 先方実施体制の整備状況
  - (1) 実施機関の組織・機構の現状
  - (2) 人員配置・帰国研修員の現況
  - (3) 予算措置
  - (4) 供与済機材の稼働状況
2. 研究所の事業概要
  - (1) 概 観
  - (2) 臨床部門
  - (3) 細菌部門
  - (4) ウイルス研究室
  - (5) 電子顕微鏡部門
  - (6) 動物実験施設
3. アフターケア協力内容に係る協議結果
  - (1) 対象とする協力分野
  - (2) 短期専門家派遣
  - (3) 機材供与
4. アフターケア実施上の留意点

## 2. 調査・協議結果

### 2-1. 先方実施体制の整備状況

#### 2-1-1. 実施機関の組織・機構の現状

先方実施機関である熱帯医学研究所（RITM）の91年現在の組織は、関連資料(1)のとおりである。

#### 2-1-2. 人員配置・帰国研修員の現況

91年現在、研究所スタッフの定員は275名（うち3名あまりが空席）である。各部門ごとの内訳は、関連資料(2)のとおりである。プロジェクト期間中、本邦研修に参加した23名のC/Pスタッフのうち、現在も同研究所に籍を置く者は9名にとどまっている。

#### 2-1-3. 予算措置

これまでの研究所活動予算の推移をみると、総額では88年に比べ91年には70%近い伸びを示している。そのうち、メンテナンス等費用 (Maintenance and Other Operating Expenses)として例年概ね40%前後が配分されている。

#### 2-1-4. 供与済機材の稼働状況

プロジェクト期間7年半余り、さらに終了後約4年間を経過した後もなお、順調に稼働しているものが大部分であるが、耐用年数を経過したものも含め、誤った使用法や、交換部品の欠如、スペアパーツが入手不可能など種々の障害により、使用に支障を来しているものも見受けられる。

### 2-2. 研究所の事業概要

#### 2-2-1. 概 観

RITMにおいて、91年に実施された研究活動は計55件であり、その内訳は継続17件、新規19件、終了12件、および分析・報告書作成中が7件である。現在同研究所は、下記の各種感染性熱帯病の現状の評価と、新たな診断治療技術の活用において指導的な役割を果たしている。

住血吸虫症・マラリア・らい病・ウイルス肝炎・ヒト免疫不全ウイルス症(HIV)・狂犬病・急性呼吸器疾患(ARI)・下痢症疾患

さらに91年には、従来の活動の拡充とともに、デング熱および結核に関する新規のプロジェクトが開始された。また、住血吸虫症、B型肝炎のワクチン・試薬開発のための基礎研究も引き続き進められている。

一方、RITMでは、熱帯病関連の技術移転を促進するため、主要感染症の臨床・研究面についての研修活動にも力を注いでいる。特に、全国から派遣された18の国立・地方医療機関の感染症対策チームに対し、研修を実施した。

また、JICAの協力を得て87年から91年まで5年間にわたり第三国研修を実施し、西太平洋地域等13の国々より参加した計53名の研修員、ならびに20名の国内参加者に対し、下痢症疾患および急性呼吸器疾患に関する研修を行なった。

RITMは、現在、ポリオ根絶、HIV検査のためのレファレンス・ラボとして機能している(87～)他、抗生物質の耐性監視の面でも中心的な機能を果たしている(88～)。

## 2-2-2. 臨床部門

外来と入院施設を有し、入院は50床(そのうち5床はICU)である。Dr. Xeres R. Navarro 以下11名のスタッフと37名の看護婦を擁する。

入院・外来の約90%は小児以下の年齢で占められ、1990年(1～12月)の入院患者は1,134名(肺炎:22%、麻疹:12.8%、下痢9.5%、コレラ8.6%、デング熱:3.9%、新生児敗血症:3.8%、マラリア:3.6%、化膿性髄膜炎:3.4%、結核性髄膜炎:3.1%)、外来部門でconsultを受けた患者:6,472名、入院部門でのそれは5,819名に上っている。これは前年度(1989)と比較して、入院患者で16.8%、外来consultで14.7%、入院consultで20.4%の増加である。1991年には、入院患者総数1,126名、外来患者7,148名と推移している。1991年における死亡原因の上位は肺炎(21.4%)、敗血症(19.4%)、麻疹後肺炎(10.2%)とこの3者で半数以上を占める。

研究分野は急性呼吸器感染症(ARI)、敗血症、下痢、髄膜炎であるが、ARIにおけるウイルス分離はこれまでの指導によりかなりの成果をあげている。原因ウイルスとして分離したものはアデノウイルス(30.7%)、エンテロウイルス(27%)、インフルエンザAウイルス(12.8%)などとなっている。

しかし、死亡順位が最も高い肺炎は麻疹後肺炎も含め、最終的には細菌性肺炎の頻度が高いと思われるが、この方面の研究の進展はみられていない。他国（フィンランド）の援助（共同研究）によりインフルエンザ菌に対するワクチンの研究が進展している。

現状をみると、細菌性肺炎の起炎菌決定法の研究（検体の採取から検鏡、定量的培養分離、さらにPCR法の導入など）の進展と早期診断法導入がまず第一に必要と感じられる。また、わが国から供与された治療用器具（例えば、呼吸管理装置）は充分活用されているが、量的にも質的にも不足している現状である。

臨床研究が円滑に行われるためには、良質の医療が施されなければならない。すなわち日常臨床に必要な器具がかなり不足している現状であり、その意味では、研究そのものの以外の臨床的な設備の援助も必要と感じられた。

#### 2-2-3. 細菌部門

Microbiology Department は Fem Julia E. Paladin 氏以下15名のスタッフからなる。

急性呼吸器感染症（ARI）に関しては、レジオネラ、マイコプラズマの培養、同定を1988～1989年にかけて確立し、Gene Probe を用いての迅速同定法を1991年に手掛けている。嫌気性菌に関しては1988年培養と同定法の指導が行われているが、今後抗生物質の感受性測定法の指導を希望している。

結核に関しては、1988年 RITMの中に結核菌専用の検査室を設け、1991年はELISA法を導入したが、結核診断における分子生物学的手法の導入を希望している。実験器具、専門家派遣を含め、研究の進展が必要である。特に、結核に関するPCR法は器具の購入が必要である。

#### 2-2-4. ウイルス研究室

ウイルス部門はMicrobiology Dept. 内の1つのSectionである。ウイルス研究室における技術移転は布上・山岡・井上・五十嵐・伊藤・名和の各専門家の努力によってかなり高いレベルになって来ている。患者材料からのウイルス分離がルーチンワークとしてできるようになっており、ARIの病原ウイルスの研究やポリオ撲滅対策に大きく貢献している。現在、Ms. Fem Paradin(M.S. ウイルス診断の経験9年)が主任をしており、Ms. Jocelyn Merin(B. S. 経験6年)のほか5名がウイルス分離・同定・

血清診断に従事している。

培養細胞（HEp-2, Vero, HeLa, RD, HFS）を用いARIの原因ウイルスの分離、蛍光抗体法による同定が行われている。ポリオ患者の糞便も外部の施設から送られて来ておりポリオ撲滅対策の一環としてポリオウイルスの分離も行われている。

デング熱患者は外来患者の原因別では第6位（1991年）であり、この分野の研究は重要と思われる。デング熱患者の血清からのウイルス分離には培養細胞（C6/36, TRA）や乳のみマウスが用いられている。また抗体価の測定には血球凝集阻止（HI）試験が用いられている。デングウイルスには1-4型の4種類の血清型があり、現在までに1-3型のデングウイルスを分離している。デングウイルスの増殖は非常に遅く、またHI試験による血清診断では過去に感染した場合でも陽性の反応（IgG抗体による反応）を示すためIgM-capture ELISAやPCR法などの迅速診断法も取り入れる必要がある。

#### ウイルス性肝炎研究室

フィリピンにおけるHBVの保有者は約12%と考えられており、その診断法やワクチン接種に関する研究は重要な課題である。馬場専門家の努力によってHBsの精製とその抗血清の作製が可能となった。これを用い逆受身血球凝集反応（RPHA）法によるHBsAg検出用試薬約47,000検体分（1990年）を作製した。その約46%はフィリピン赤十字（PNRC）で使用されている。またHBs抗体検出用の受身赤血球凝集（PHA）法のキット約32,000検体分の作製にも成功している。さらに効率のよい診断用試薬の作製のための専門家の派遣を強く希望している。血漿由来HBsワクチンの精製に関する研究も国内・国外の施設と協力して行っている。しかし研究室の規模から考えると大量生産は困難と思われる。また肝炎ウイルスの原因ウイルスとしてHBVとならんでHCVが重要であることが最近わかってきた。HCVの診断用試薬の作製に関しても日本からの専門家の指導をもとめている。

#### 2-2-5. 電子顕微鏡部門

各分野の研究者が利用する電子顕微鏡は2台保有し、1台は故障し、稼動していない。単に修理するのみでは、今後のメンテナンスに問題があるので、エンジニアの教育を含めた専門家派遣が必要であろう。各分野の研究促進のために、充実し

なければならぬ部門である。

#### 2-2-6. 動物実験施設

1985年新しい動物実験施設が建設され、日本の専門家Dr. Asano(1985年)および Dr. Suzuki(1987年)の指導が行われている。現在、マウス：4,000匹、ウサギ：40羽、モルモット：10頭、ヤギ：4頭（ビルの外で）を飼育している現状である。実験施設は手狭であり、現在は飼育施設としての利用が精いっぱいであり、ここでの各種の実験は不可能な状態である。さし当っては飼育ケージが必要な状態である。



### 3. アフターケア協力内容に係る協議結果

#### 3-1. 対象とする協力分野

専門家派遣・機材供与とも、研究所の各部門から要望が出されたが、当方よりアフターケア協力の趣旨・スキームを説明し、再度内部調整を依頼した結果、最終的に、以下の各項の協力内容とすることで先方と合意し、協議議事録に日比双方で署名した（付属資料 1.参照）。

#### 3-2. 短期専門家派遣

| 希望分野       | 項目  | 希望派遣期間 |
|------------|---|--------|
| (1) ウイルス肝炎 | B型肝炎・C型肝炎のスクリーニング<br>に係る検査能力の強化           | 6か月    |
| (2) 微生物学   | 免疫学的検査（LAT・ELISA）<br>細菌検査のための分子生物学（PCR技術） | 6か月    |
| (3) 機材保守   | 電子顕微鏡保守・管理                                | 1か月    |

#### 3-3. 機材供与

先方より提出のあった各部門の希望機材リストに沿って、予算の範囲内で供与する（ただし、購入後のアフターケア、スペアパーツの入手面等を考慮し、できる限り現地にて調達すべく、比事務所に資金を示達し、購入手続きを行なうこととする）。

#### 3-4. アフターケア実施上の留意点

##### (1) 要請書の取り付け

上記の専門家派遣ならびに機材供与に係る要請書の取り付けについては、本年5月に予定されている大統領選挙以降の政府部内の動きによって、正式提出までに多大な時間を要するおそれもあるところ、できるだけ早期に提出あるよう、比事務所を通じ先方に働きかける必要がある。



付属資料

1. 協議議事録（ミニッツ）
2. 関連資料
3. 収集資料一覧表



1. 協議議事録 (ミニッツ)

THE MINUTES OF DISCUSSIONS  
BETWEEN THE JAPANESE AFTERCARE SURVEY TEAM  
AND THE AUTHORITIES CONCERNED  
OF THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES  
ON AFTERCARE PROGRAMME FOR THE RESEARCH INSTITUTE FOR  
TROPICAL MEDICINE PROJECT

The Japanese Aftercare Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by M.D. Atsushi SAITO, Professor, First Department of Internal Medicine, Faculty of Medicine, University of the Ryukyus, visited the Republic of the Philippines from March 23, 1992 to March 28, 1992 for the purpose of working out the details of the aftercare programme covering former technical cooperation to the Research Institute for Tropical Medicine Project.

During its stay in the Republic of the Philippines, the Team exchanged views and had a series of discussions with the Philippine authorities concerned in respect of desirable measures to be taken by both governments for successful implementation of the above-mentioned programme.

As a result of the discussions, both parties agreed to recommend to their respective governments the matters referred to in the documents attached hereto.

Alabang, Muntinlupa,  
Metro Manila  
March 26, 1992

*Atsushi Saito*

M.D. Atsushi SAITO  
Leader  
Aftercare Survey Team  
Japan International Cooperation  
Agency  
JAPAN

*Mary Ann Lansang*

M.D. MARY ANN LANSANG  
Assistant Director  
Research Institute for  
Tropical Medicine  
PHILIPPINES

APPENDIX

LIST OF ATTENDANTS:

JAPANESE SIDE

Members of the Aftercare Survey Mission

1. Dr. Atsushi Saito  
(Leader, Acute Respiratory Infections)  
Professor  
First Department of Internal Medicine  
Faculty of Medicine  
University of the Ryukyus
2. Dr. Yoshihiro Makino  
(Virology)  
Associate Professor  
Faculty of Medicine  
University of the Ryukyus
3. Mr. Masaharu Saito  
(Technical Cooperation)  
Staff  
Medical Cooperation Division, Medical Cooperation Department, JICA

RITM SIDE

1. Dr. Mary Ann Lansang  
Asst. Director
2. Dr. Remigio Olveda  
Chief, Research & Training Division
3. Mrs. Minerva G. Tarrayo  
Chief, Administrative Division
4. Mrs. Salud Zaldivar  
Chief, Paramedical Division
5. Dr. Xerxes Navarro  
Head, Clinical Department
6. Dr. Rosario Capeding  
Head, Department of Microbiology
7. Dr. Bernadette Ramirez  
Head, Department of Immunology
8. Dr. Noel Miranda  
Head, Animal Research Laboratory

9. Ms. Cielo Pasay  
OIC, Parasitology & Medical  
Entomology Department
10. Dr. Florencio Dizon  
OIC, Department of Pathology
11. Ms. Fem Julia Paladin  
Head, Virology Section
12. Engr. Proceso Ramos  
Proprietor, PP Ramos Manpower  
Services
13. Engr. Nolan Vicente  
Biomedical Engineer
14. Mr. Noli Manalo  
Public Relation Officer
15. Ms. Didith Averilla  
Exec. Asst., Director's  
Office

ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Republic of the Philippines will cooperate with each other in implementing the Programme for the purpose of furthering the effect of technical cooperation to the Research Institute for Tropical Medicine Project through aftercare technical cooperation, thereby contributing to public health and the prevention and control of tropical infectious diseases in the Republic of the Philippines.
2. The programme will be implemented in accordance with the Tentative Schedule of Implementation which is given in Annex I.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense the services of Japanese experts as listed in Annex II through normal procedures under the technical cooperation scheme of the Government of Japan.

2. The Japanese experts referred to in 1 above will be granted in the Republic of the Philippines the privileges, exemptions and benefits no less favorable than those accorded to experts of third countries or of other international missions working in the Republic of the Philippines.

### III. PROVISION OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials (hereinafter referred to as "the Equipment") as necessary for implementation of the Programmes listed in Annex III through normal procedures under the technical cooperation scheme of the Government of Japan.
2. The Equipment will become the property of the Government of the Republic of the Philippines upon being delivered C.I.F. to the Philippine authorities concerned at the ports and/or airports of disembarkation, and will be utilized exclusively for implementation of the programme in consultation with the Japanese experts referred to in Annex II.

IV. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES

1. The Government of the Republic of the Philippines should make necessary arrangements for requesting the dispatch of Japanese experts and the provision of the Equipment as mentioned in III above by submitting the application forms (Form A-1 and Form A-4) as soon as possible through the proper channel.
2. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines should take necessary measures to supply or replace, at its own expense, the machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for implementation of the programme other than those provided through JICA under III above.
3. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines should take necessary measures for tax exemption, custom clearance, and internal transportation of the Equipment as mentioned in III above as soon as it arrives at the ports of disembarkation.
4. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines should take necessary measures

to meet all running expenses necessary for implementation of the programme.

5. The Government of the Republic of the Philippines should allocate the necessary number of suitably qualified personnel corresponding to each Japanese expert to be dispatched by the Government of Japan as specified in Annex II for effective and successful transfer of technology under the programme.
6. The Government of the Republic of the Philippines should make any other necessary arrangement to contribute positively to smooth and successful implementation of the programme.

#### V. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Republic of the Philippines shall undertake to bear claims, if any arise, against the Japanese experts engaged in the programme resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Republic of the Philippines except for those arising from willful misconduct or gross negligence by the Japanese experts.

## VI. TERM OF COOPERATION

The technical cooperation programme mentioned in this Attached Document will be implemented within the Japanese fiscal year 1992 (from April 1, 1992 to March 31, 1993).

ANNEX I TENTATIVE SCHEDULE OF IMPLEMENTATION

| YEAR                          | 1 9 9 2   |   |   |   |   |   |   |    |    |    |   |   | 1 9 9 3 |  |  |
|-------------------------------|-----------|---|---|---|---|---|---|----|----|----|---|---|---------|--|--|
| MONTH                         | 3         | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3       |  |  |
| DISPATCH OF SURVEY TEAM       | <--- ---> |   |   |   |   |   |   |    |    |    |   |   |         |  |  |
| DISPATCH OF JAPANESE EXPERTS: |           |   |   |   |   |   |   |    |    |    |   |   |         |  |  |
| PROVISION OF EQUIPMENT        |           |   |   |   |   |   |   |    |    |    |   |   |         |  |  |

JAPANESE EXPERTS: 1 to 3 personnel in the field of Diagnosis on tropical infectious diseases and Repair and Maintenance of Equipment will be dispatched. Dispatch of experts on supplemental technical guidance will be subject to budgetary condition and the possibilities for recruiting experts.

## ANNEX II JAPANESE EXPERTS

In order to implement the programme, the following Japanese experts will be dispatched to render such technical guidance as follows.

### 1. Short-term experts in the field of

- (1) Diagnosis on tropical infectious diseases
- (2) Repair and maintenance of the Equipment provided by the Government of Japan

### 2. Scope of technical guidance

- (1) Diagnosis on tropical infectious diseases within the scope of R/D

To train Philippine counterpart personnel and transfer necessary technology on the above field during the term of cooperation to the Research Institute for Tropical Medicine Project.

- (2) Repair and maintenance of the Equipment

To train Philippine counterpart personnel and transfer necessary technology for the operation, maintenance, check-up and repair of the Equipment provided by the Government of Japan.

ANNEX III PROVISION OF EQUIPMENT

Equipment to be provided by the Government of Japan through JICA will be as follows:

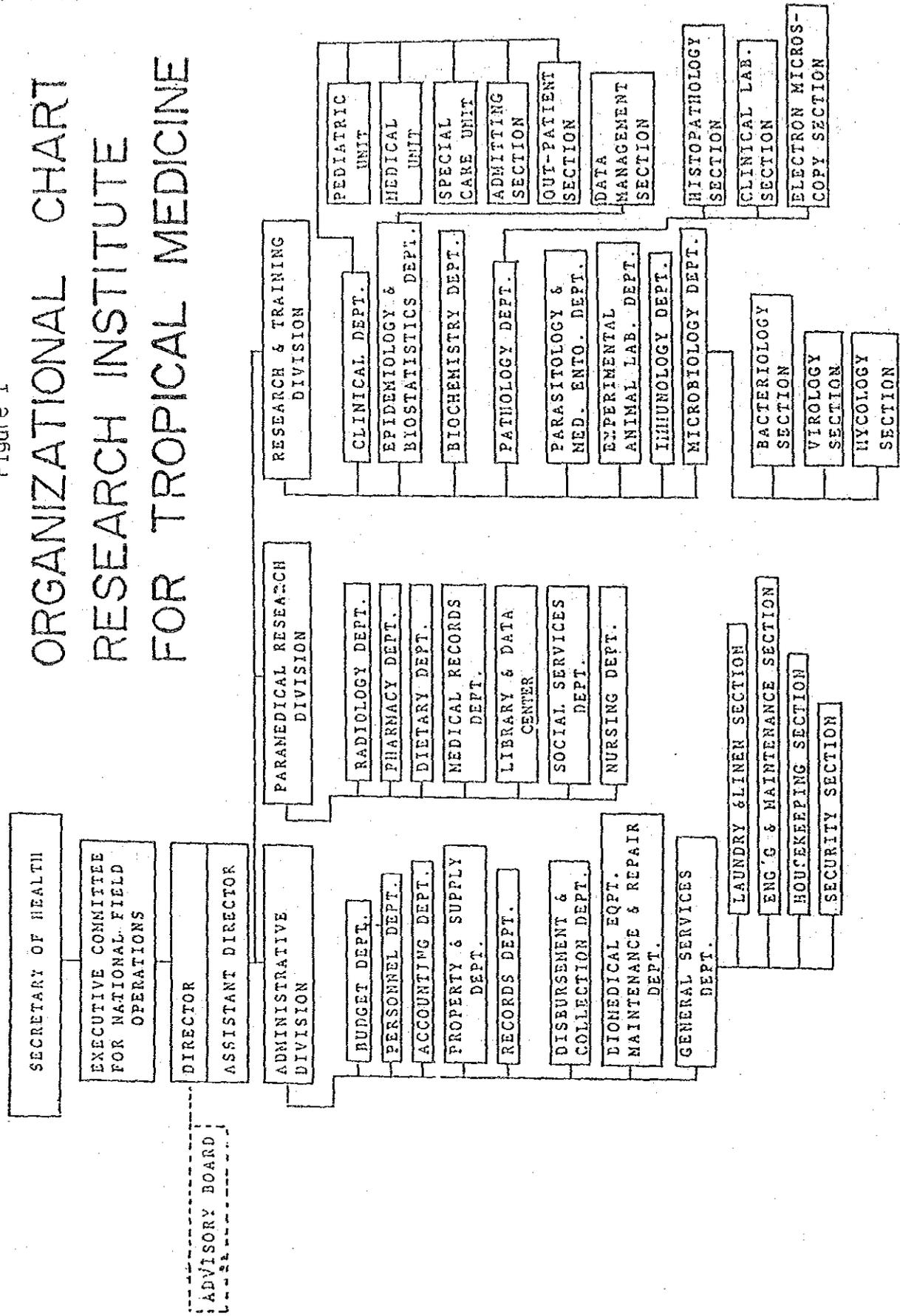
1. Equipment for supplemental technical guidance
2. Spare parts and accessories for the machinery and equipment provided by Japan

Provision of the above equipment is subject to change according to budgetary and equipment delivery conditions.

## 2. 関連資料

- (1) 熱帯医学研究所 (RITM) 組織図
- (2) RITMスタッフ名簿
- (3) 短期専門家要望書
- (4) 希望機材リスト
- (5) 研究所活動概要

Figure 1



(2) R I T M スタッフ名簿

Republic of the Philippines  
Department of Health  
RESEARCH INSTITUTE FOR TROPICAL MEDICINE  
Alabang, Muntinlupa, Metro Manila  
March 17, 1992

OFFICE OF THE DIRECTOR

Director . . . . . MEDIADORA C. SANIEL, M.D.  
Assistant Director . . . . . Mary Ann D. Lansang, M.D.  
Science Research Specialist II . . . . .  
Secretary III . . . . . Shelyn D. Lavarias  
Clerk III . . . . . Elsa La Valle

ADMINISTRATIVE DIVISION

Administrative Office

Administrative Officer V . . . . . Minerva G. Tarrayo  
Clerk III . . . . . Lita V. Lara  
Laundry Worker I . . . . . Rosalia S. Fugoso  
Reproduction Machine Operator I . . . . . Fidel A. Rara  
Messenger . . . . . Jose Alex H. Petersen  
Science Aide . . . . . Ben R. Rio

Budget Department

Budget Officer III . . . . . Emma. P. Vergara  
Budget Officer II . . . . . Leticia M. Deomampo  
Clerk III . . . . . Laura G. Deveza

PERSONNEL DEPARTMENT

Human Resource Management Officer III . . . . . MERIA T. SUCALDITO  
Human Resource Management Assistant . . . . . Estrella B. Luna  
Human Resource Management Aide . . . . . Marilee C. San Pedro  
Clerk III . . . . . Carmen S. Regis  
Utility Worker I . . . . . Ma. Mebel S. Araque  
Utility Worker I . . . . . Lea L. Naldoza

Accounting Department

Accountant III . . . . . Norma M. Dabu  
Accountant I . . . . . Leonora A. Aniel  
Accounting Clerk III . . . . . Teofista M. Mangubat  
Budgeting Assistant . . . . . Ofelia T. Valendez  
Accounting Clerk I . . . . . Victoria N. Rara  
Clerk II . . . . . Ma. Julia Liberty Ipao

Billing Section / Information Counter

Communication Eqpt. Operator I . . . . . Evangeline Gambol  
Clerk II . . . . . Eleanor Bayona  
Medical Lab. Aide . . . . . Erminia H. Virtuocio  
Clerk II . . . . . Marigin S. Daclao  
Clerk II . . . . . Information . . . . . Erwin F. Balana  
Laundry Worker I . . . . . Gaspar B. Langam

Property and Supply Department

Supply Officer III . . . . . Lucina B. Aliwalas  
Supply Officer II . . . . . Mae Marie E. Espino  
Statistician II . . . . . Nilda S. Libuit  
Clerk III . . . . . Roehl D. Hernandez  
Clerk III . . . . . Juvy L. Leyesa  
Clerk III . . . . . Roberto C. Pineda  
Storekeeper II . . . . . Rufino L. Lantín  
Utility Worker I . . . . . Gemma L. Madecastro  
Utility Worker I . . . . . Ricardo A. Prudenolo  
Utility Worker I . . . . . Genaro C. Agustin  
Laundry Worker I . . . . . Corazon G. Soobedo

General & Medical Records Department

Records Officer III . . . . . Florinda G. Tuwillo  
Records Officer II . . . . . Roseller M. Flores  
Assistant Statistician . . . . . Myrna C. Beramo  
Clerk III . . . . . Michael M. Medina  
Communication Eqpt. Operator I . . . . . Elsa C. Datungputi  
Communication Eqpt. Operator I . . . . . Ma. Theresa C. Cervantes  
Communication Eqpt. Operator I . . . . .

Disbursement & Collection Department

Cashier III . . . . . Lutgarda S. Patricio  
Disbursing Officer II . . . . . Marissa M. Pineda  
Clerk III . . . . . Carol S. Alipio  
Clerk II . . . . . Antonia G. Raguos  
Utility Worker I . . . . . Belinda M. Nadonza

Biomedical Eqpt. Maintenance & Repair Department

Engineer II . . . . . Jose Nolan M. Vicente  
Engineer II . . . . . Benjamin T. Gandeza  
Engineer I . . . . . Alex Q. Tamundong  
Audio Visual Technician . . . . . Guilnerio Bosario  
Electronics Comm. & Eqpt. Tech. . . . .

TRAINING CENTER

Laboratory Aide II . . . . . Alicia F. Dajao  
Laboratory Aide II . . . . . Ruel Y. Sagadal

DORMITORY

Dormitory Manager . . . . . Marjorie M. Damasco

GENERAL SERVICES DEPARTMENT

Statistician II . . . . . Marlene A. Mabutas  
Mechanic II . . . . . Ambrosio P. Castillo  
Driver II . . . . . Marcelo B. Abad  
Driver I . . . . . Lauro A. Carlos  
Driver I . . . . . Vicente R. Fabregas  
Driver I . . . . . Artemio E. Limas  
Driver I . . . . . Feliciano C. Cadaoan  
Utility Worker I . . . . . Carmelo I. Reynon

LAUNDRY & LINEN SECTION

Seamstress . . . . . Fely P. Balosbalos  
Seamstress . . . . . Doeliza R. Boseta  
Laundry Worker I . . . . . Mercedita A. Arcilla  
Laundry Worker I . . . . . Jessica D. Calero  
Laundry Worker I . . . . . Robenzer E. Ines  
Laundry Worker I . . . . . Antonio B. Bermundo  
Clerk II . . . . . Maria C. Abad

PARAMEDICAL DIVISION

Suporvising Sol. Res. Specialist . . . . . Salud B. Saldivar  
Clerk II . . . . . Emano Cavito

RADIOLOGY DEPARTMENT

Science Research Assistant . . . . . Marilou Perdito  
Science Research Assistant . . . . . Josolito T. Molina  
Science Research Assistant . . . . . Wilson Velina

PHARMACY DEPARTMENT

Senior Science Research Specialist . . . . .  
Science Research Specialist I . . . . . Imolda Q. Villaraza  
Science Research Analyst . . . . . Lourdes E. Ilagan  
Science Research Specialist I . . . . . Joycelyn M. Dacumos  
Science Research Assistant . . . . . Elena M. Soriano  
Science Research Assistant . . . . . Casana S. Marchombas  
Science Research Assistant . . . . .  
Science Aide . . . . . James A. Velasco

DIETARY DEPARTMENT

|   |                        |
|---|------------------------|
| Sr. Science Research Specialist . . . . . | Nieves C. Serra        |
| Science Research Specialist I . . . . .   | Marilou S. Perez       |
| Science Research Analyst . . . . .        | Cristina B. Carbonilla |
| Cook I . . . . .                          | GILDA C. Veron         |
| Cook I . . . . .                          | Renato P. Clemente     |
| Cook I . . . . .                          | Felicita H. Llufer     |
| Utility Worker I . . . . .                | Rachel M. Pedire       |
| Utility Worker I . . . . .                | Wilson T. Oreal        |
| Utility Worker I . . . . .                | Dionisio A. Cabanela   |
| Utility Worker I . . . . .                | Gregorio D. Guavarra   |
| Utility Worker I . . . . .                | Evangelista M. Orig    |
| Utility Worker I . . . . .                | Sonia T. Lo            |

LIBRARY

|   |                     |
|---|---------------------|
| Science Research Specialist I . . . . . | Matilde S. Averilla |
| Librarian II . . . . .                  | Norma Y. Ledesma    |

SOCIAL SERVICE DEPARTMENT

|   |                        |
|---|------------------------|
| Science Research Specialist I . . . . . | Carmencita S. Baguinan |
| Social Welfare Officer . . . . .        | Cristina dela Cruz     |

NURSING DEPARTMENT

|  |                         |
|--|-------------------------|
| Senior Science Research Specialist . . . . . | Ester M. Romano         |
| Nurse III . . . . .                          | Lolita D. Maynes        |
| Nurse III . . . . .                          | Loida A. Oliguino       |
| Nurse III . . . . .                          | Erlinda V. Cabanting    |
| Nurse II . . . . .                           | Laura S. Catarata       |
| Nurse II . . . . .                           | Herbina T. Babigen      |
| Nurse II . . . . .                           | Magdalena Tiua          |
| Nurse II . . . . .                           | Abella K. Rabadan       |
| Nurse II . . . . .                           | Carina T. Oller         |
| Nurse II . . . . .                           | Claro Abaño             |
| Nurse II . . . . .                           | Grace L. Padilla        |
| Nurse II . . . . .                           | Virgincita D. Dominise  |
| Nurse II . . . . .                           | Elpidio E. Dasallo Jr.  |
| Nurse I . . . . .                            | Raul Llanera            |
| Nurse I . . . . .                            | Jocelyn C. Pastorel     |
| Nurse I . . . . .                            | Monique Grace B. Cajelo |
| Nurse I . . . . .                            | Rogeryn Febredo         |
| Nurse I . . . . .                            | Larredo D. Azores       |
| Nurse I . . . . .                            | Ethel Mendoza           |
| Nurse I . . . . .                            | Rowena E. Dela Cruz     |
| Nurse I . . . . .                            | Thelma C. Torres        |
| Nurse I . . . . .                            | Aileen B. Canaman       |
| Nurse I . . . . .                            | Pilita B. Manganaan     |
| Nurse I . . . . .                            | Jovy Lampsan            |
| Nurse I . . . . .                            | Claire Silveo           |
| Nurse I . . . . .                            | Janeth I. Malaluan      |
| Nurse I . . . . .                            | Sonia A. Cordero        |
| Nurse I . . . . .                            | Miguel R. Froilan Jr.   |
| Nurse I . . . . .                            | Melissa A. Servillon    |
| Nurse I . . . . .                            | Marife Silvestre        |
| Nurse I . . . . .                            | Leny V. Sumagaysay      |
| Nurse I . . . . .                            | MylinM. Santos          |
| Nurse I . . . . .                            | Ma. Rosatio O. Ojeda    |
| Nurse I . . . . .                            | Marie Ana S. De Castro  |
| Nurse I . . . . .                            | Rogelio P. Buezon       |

|                            |                                   |
|----------------------------|-----------------------------------|
| Nurse I . . . . .          | Dorces T. Carpio                  |
| Nurse I . . . . .          | Larry Miranda                     |
| Science Aide . . . . .     | Raul A. Candelario                |
| Science Aide . . . . .     | Cerlita M. Capanzana              |
| Science Aide . . . . .     | Magdalena I. Castillo             |
| Science Aide . . . . .     | Luzviminda G. De Ocampo           |
| Science Aide . . . . .     | Elena G. Doloso                   |
| Science Aide . . . . .     | Hmelita B. Ga                     |
| Science Aide . . . . .     | Irma B. Guevarra                  |
| Science Aide . . . . .     | Ma. Ana C. Inocencio              |
| Science Aide . . . . .     | Carol Alinsod                     |
| Science Aide . . . . .     | Catleya Abag                      |
| Science Aide . . . . .     | Normaan Barza(Substitute Ben Rio) |
| Science Aide . . . . .     | Othelia T. Taghap                 |
| Science Aide . . . . .     | Guillerma A. Turico               |
| Science Aide . . . . .     | Cherry Pormento                   |
| Science Aide . . . . .     | Erlinda Marasigan                 |
| Utility Worker I . . . . . | Alberto P. CREencia               |
| Utility Worker I . . . . . | Rodante M. Mostrales              |
| Utility Worker I . . . . . | Bernardo M. Miranda               |
| Utility Worker I . . . . . | Flaviano M. Namuag                |
| Utility Worker I . . . . . | Herminigildo Q. Tandugon          |
| Utility Worker I . . . . . | Oscar I. Vidal                    |

RESEARCH & TRAINING DEPARTMENT

|  |                           |
|--|---------------------------|
| Medical Officer VII . . . . .              | Remigio M. Olveda, M.D.   |
| Supervising Sci. Res. Specialist . . . . . | Veronica L. Tallo         |
| Science Research Specialist II . . . . .   | Mary Elizabeth G. Miranda |
| Science Research Analyst . . . . .         | Rosanna A. Castro         |

CLINICAL DEPARTMENT

|  |                         |
|--|-------------------------|
| Medical Officer V . . . . .                | Xerxes R. Navarro       |
| Medical Officer V . . . . .                | Irene C. Lintag         |
| Medical Officer V . . . . .                | Salvacion R. Gatchalian |
| Medical Officer V . . . . .                | Marilla G. Lucero       |
| Medical Officer V . . . . .                | Socorro P. Lupisan      |
| Medical Officer V . . . . .                | Felicita M. MEDalla     |
| Medical Officer V . . . . .                | Ma. Rosario Z. Capeding |
| Medical Officer V . . . . .                | Celia C. Carlos         |
| Supervising Sci. Res. Specialist . . . . . | Rosemarie T. Santana    |
| Medical Specialist I . . . . .             | Mari Rose A. Aplasca    |
| Medical Specialist I . . . . .             | Fe Esperanza J. Espino  |
| Clerk II . . . . .                         | Merlyna Bongalec        |

EPIDEMIOLOGY DEPARTMENT/DATA MANAGEMENT

|  |                      |
|--|----------------------|
| Medical Officer V . . . . .                | Cecilia A. Acuin     |
| Supervising Sci. Res. Specialist . . . . . | Gemiliano D. Aligui  |
| Supervising Sci. Res. Specialist . . . . . | Cynthia A. Miguel    |
| Supervising Sci. Res. Specialist . . . . . | Ma. Elinpr S. Sunico |
| Supervising Sci. Res. Specialist . . . . . | Susan T. Tan         |
| Science Research Specialist II . . . . .   | Angelita C. Balis    |
| Science Research Specialist II . . . . .   | Alberta C. Sta Maria |
| Science Research Specialist I . . . . .    | Menchie D. Alinea    |
| Science Research Specialist I . . . . .    | Evangelina Cabalona  |

EXPERIMENTAL ANIMAL LAB.

Senior Science Research Specialist . . . . . Noel Lee J. Miranda  
Science Research Specialist I . . . . . Celestina G. Robles  
Science Research Analyst . . . . .  
Science Research Analyst . . . . .  
Laboratory Aide II . . . . . Emmanuel B. Baylon  
Laboratory Aide II . . . . . Edgardo M. Domicog  
Laboratory Aide II . . . . . Roger I. Sippoo

IMMUNOLOGY DEPARTMENT

Supervising Science Research Specialist . . . . . Bernadette L. Ramirez  
Medical Officer V . . . . . Gertrude P. Chan  
Science Research Specialist II . . . . . Luz P. Acostas  
Medical Specialist I . . . . .  
Science Research Specialist II . . . . . Fe Amor O. Vinculado  
Science Research Specialist I . . . . . Fe F. Aligui  
Science Research Specialist III . . . . . Rebecca M. Notorio  
Science Research Specialist I . . . . . Rally Calvo  
Science Research Analyst . . . . . Cerenia T. Ligan  
Science Research Analyst . . . . . Virgilio Antonio A. Averilla  
Laboratory Aide II . . . . . Ernesto A. Abeto  
Laboratory Aide II . . . . . Alberto D. Anduyon  
Science Aide . . . . . Ricardo A. Reyes Jr.

MICROBIOLOGY DEPARTMENT

Senior Science Research Specialist . . . . .  
Senior Science Research Specialist . . . . .  
Senior Science Research Specialist . . . . . Fem Julia E. Paladín  
Senior Science Research Specialist . . . . . Lydia T. Sombrero  
Science Research Specialist II . . . . . Rosa B. Mate  
Science Research Specialist I . . . . . Gloria K. Reclusado  
Science Research Specialist II . . . . . Jocelyn P. Merin  
Science Research Specialist I . . . . . Ma. Teodora Erazo  
Science Research Specialist I . . . . . Grace A. Esperar  
Science Research Specialist I . . . . . Josephine G. Geronimo  
Science Research Specialist I . . . . . (MELANIE JACALNEY)  
Science Research Specialist I . . . . . Mariettas L. Lagrada  
Science Research Specialist I . . . . . Rizalina B. Navarro  
Science Research Specialist I . . . . . (RUFINA QULJANO)  
Science Research Analyst . . . . . Mervi A. Detorio  
Science Research Analyst . . . . . Ma. Lourdes Parunog  
Science Research Analyst . . . . . Ronelio M. Kara  
Laboratory Aide II . . . . . Cecilio C. Sabangan, Jr.

Science Research Specialist I . . . . . Lydia S. Chand  
 Science Research Specialist I . . . . . Heidi Jean F. Franciaco  
 Science Research Specialist I . . . . . Josephine D. Logronio  
 Science Research Specialist I . . . . . Carol C. Malacad  
 Science Research Specialist I . . . . . Portia P. Alday  
 Science Research Specialist I . . . . . Luz D. Patalod  
 Science Research Analyst . . . . . Arleen A. Casantusan

BIOCHEMISTRY DEPARTMENT

Science Research Specialist II . . . . . Angelita D. Delas Alas  
 Science Research Analyst . . . . .  
 Science Research Analyst . . . . . Evariza E. Lituco

PATHOLOGY DEPARTMENT

Supervising Science Research Specialist . . . . . Salvacion C. Quiapo, M.D.  
 Medical Officer V. . . . . Dra. Agnes V. Barrientos  
 Medical Specialist I . . . . . Dr. Florencio C. Dizon  
 Science Research Specialist I . . . . . Emiliana L. Camallere  
 Science Research Assistant . . . . . Arnel M. Guia  
 Laboratory Aide II . . . . . Virgilio A. Lunod  
 Laboratory Aide II . . . . . Jose C. Fabricog  
 Utility Worker I . . . . . Ma. Gina Togonon  
 Science Research Specialist I . . . . . Estatera B. Cabic

CLINICAL LAB. SECTION

Science Research Specialist I . . . . . Gina Ma. Q. Nepouceno  
 Science Research Specialist I . . . . . Daisy P. Dayao  
 Science Research Analyst . . . . . Karen C. Quinsing  
 Science Research Analyst . . . . . Lina O. Dones  
 Science Research Analyst . . . . . Rebecca BV. Guia  
 Science Research Analyst . . . . . Rosalie S. Santiago  
 Science Research Analyst . . . . . Ma. Myrissa B. Ubaldo  
 Science Research Analyst . . . . . Josephine D. Rodelas  
 Science Research Analyst . . . . . Julie M. Navat  
 Science Research ASSISTANT . . . . . Amelita Macalma  
 Science Research Assistant . . . . . Jocelyn F. Berte  
 Laboratory Aide II . . . . . Ireneo E. Balight  
 Science Research Specialist I . . . . . Marie Joanne C. Salazar

PARASITOLOGY DEPARTMENT

Chief, Science Research Specialist . . . . .  
 Medical Specialist I . . . . . Ma. Dorina G. Bustos  
 Senior Science Research Specialist . . . . . Ma. Cielo J. Pasay  
 Science Research Specialist II . . . . .  
 Science Research Specialist I . . . . . Elizabeth P. Torres  
 Science Research Analyst . . . . . Mary Grace L. Duran  
 Science Research Analyst . . . . . Catalina G. Roxos  
 Science Research Analyst . . . . . Jennifer M. Sampang  
 Science Aide . . . . .

ANNEX II

SHORT-TERM EXPERTS REQUESTED

| EXPERT   | COUNTERPART PERSONNEL  |
|--|--|
| <p>1. AREA OF VIRAL HEPATITIS<br/>Laboratory capability strengthening is requested for the local production of quality reagents for screening of HBV and HCV infections. Our specific needs are the laboratory-scale production of assay reagents for detection of anti-Hbc, HbeAg &amp; anti-HbeAg. Also, expertise in the production of HB immune globulin is needed. Finally, expert technical support is requested for the development of an assay for circulating HCV antibodies.</p> <p>Duration: 6 months</p> | <p>Name: FE AMOR VINCULADO, 44<br/>Position: Science Research Specialist II<br/>Qualification: B.S. Hygiene Graduate<br/>Trained by Mr. Kiyoshi Baba and Japanese expert on the production of reagents for HBsAg testing (Reverse passive Hemagglutination)</p> <ol style="list-style-type: none"><li>Purification of HBsAg by ultracentrifugation and affinity chromatography</li><li>Purification of mono-specific antibodies by affinity &amp; chromatography</li><li>Production of HBsAg by immunization to rabbits of purified HbsAg.</li><li>Stabilization of srbc w/ glutacaldehyde</li><li>Sensitization of srbc using tennic acid</li></ol> |
| <p>2. AREA OF BACTERIOLOGY (MYCO-BACTERIA)<br/>Description: Microbiologist w/ expertise on immunological assays (LAT &amp; ELISA) and molecular biology applied to detection of mycobacteria</p> <p>Duration: 6 months</p>   | <ol style="list-style-type: none"><li>Name: Ms. Lydia Sombrero, 41<br/>Position: Senior Science Research Specialist</li><li>Malou Parumog, 24<br/>Science Research Analyst<br/>Qualification:<br/>both are working actively in the mycobacteria laboratory</li></ol>   |
| <p>3. BIOMEDICAL ENGINEER FOR MAINTENANCE TECHNIQUES FOR ELECTRON MICROSCOPY<br/>Description:<br/>Expert in the maintenance of Electron microscopes, SEM, Model S-430 and TEM, Model H-300</p> <ol style="list-style-type: none"><li>Trouble shooting and repair</li><li>Alignment of microscope column</li><li>Regular cleaning &amp; check-up</li></ol> <p>Duration: 1 month</p>   | <ol style="list-style-type: none"><li>Engr. Nolan Vicente, 27<br/>Position: Engineer II<br/>Qualification:<br/>Biomedical Engineer</li></ol>   |

(4) 希望機材リスト

ANNEX III  
EQUIPMENT FOR SUPPLEMENTAL TECHNICAL GUIDANCE

| Equipment/Donor                                 | Specification                         | Repair Specifications : Needed | Spare Parts : Specifications                               | Replacement/ : Cost | Estimated : Cost | Availability :             |
|---|---------------------------------------|--------------------------------|--|---------------------|------------------|----------------------------|
| ANNEX III                                       |                                       |                                |  |                     |                  |                            |
| A. REPAIR OF MAINTENANCE                        |                                       |                                |  |                     |                  |                            |
| 1. Compressor for Secnrst ventilator            |                                       |                                |  |                     | 78,000.00        | locally available          |
| 2. Picture tube of X-ray machine (Hitachi)      |                                       |                                |  |                     | 130,000.00       | not available locally      |
| 3. Transducer of ultrasonic nebulizer (14 pcs.) |                                       |                                |  |                     | 52,000.00        | not available locally      |
| 4. Spare parts of ACDMA ventilator              |                                       |                                |  |                     | 78,000.00        | not available locally      |
| 4.1. Corrugated tube set                        |                                       |                                |  |                     |                  |                            |
| 4.2. Respiratory bacillus filter                |                                       |                                |  |                     |                  |                            |
| 4.3. Hose heater assembly                       |                                       |                                |  |                     |                  |                            |
| 4.4. Ex/Ins tube                                |                                       |                                |  |                     |                  |                            |
| 5. Preparative Ultracentrifuge                  | Preparative ultracentrifuge 70P-72    |                                | Motor shaft<br>temperature<br>sensor, unbalanced<br>switch |                     | 25,000.00        | thru exclusive distributor |
| 6) High speed refrigerated centrifuge           | Hitachi 20 PR-52                      | refrigeration system           | refrigeration system                                       |                     | 24,000.00        | thru exclusive distributor |
| 7) Zonal Rotor                                  | RPZ 33T-363                           | change of overspeed adaptor    | overspeed adaptor  |                     | 15,000.00        | thru exclusive distributor |
| 8) Inverted microscope                          | Olympus INT-C                         |                                | camera   |                     | 25,000.00        | available locally          |
| 9) Titertek Multiskan                           | 96 wells<br>400-750 nm,<br>0-2,000.00 | replacement                    | sensor<br>bulb   |                     | 20,000.00        | not available locally      |

ANNEX III  
EQUIPMENT FOR SUPPLEMENTAL TECHNICAL GUIDANCE

| Equipment/Donor                                 | Specification                | AFTER CARE   |  |  |
|---|------------------------------|--|--|--|
|   |                              | Repair Specifications : Spare Parts : Needed                       | Replacement/ : Specifications:   | Estimated : Cost : Availability  |
| 10) Cold room                                   |                              | : refrigeration system   | : to fit model   | : 100,000.00 : not available   |
| 12) pH meter                                    | : Model HM-20E TOA           | : broken electrode   |  | : 5,000.00 : not available locally                                     |
| 13) Minifraction collector                      | : SU - 1410 ATTU             | : not dispensing to desired volume                                 |  | : 4,000.00 : not available locally                                     |
| 14) Water bath                                  | : Toys TS-386                | : V-belt missing   |  | : 500.00 : available locally   |
| 15) Safety Cabinet II: SCV 1302 ECI1A (2 units) | : Hitachi                    | : air flow system check : replacement of filter                    | : Heba filter : to fit model   | : 42,750.00 : not available locally                                    |
| 16) Clean bench                                 | : PCV-841(842) ANG : Hitachi | : defective front shutter moving mechanism : replacement of filter | : coil type : to fit model : sprg balance : Heba filter : to fit model : pre-filter : to fit model : gas valve | : 12,500.00 : not available locally : 15,000.00 : 12,500.00 : 1,250.00 |
| 17) Clean bench                                 | : AKI Model 1040 : INEMOTO   | : air flow system check : replacement of filter                    | : vacuum dump:HP 1/6, 220 V : HEPA filter : to fit model   | : 20,000.00 : locally : 12,500.00 : not available locally              |
| 18) Water bath                                  | : BT-25 YAMATO               | : replacement of temperature controller                            | : temperature : to fit model : controller  | : 2,500.00 : not available locally                                     |
| 19) Ultrasonic disruptor                        | : Model UR-200P : TOMY SEIKO | : replacement of ferrite rods                                      | : ferrite rods : to fit model  | : 6,250.00 : not available locally                                     |
| 20) liquid nitrogen tank (2 units)              | : SANYO                      | : leaking units, insert : pieces, for replacement                  | : 35L cap SANYO  | : 125,000.00 : equivalent : available                                  |
| 21) pipet washer                                | : AKI                        | : jar replacement  | : ultrasonic : 300w, 220V  | : 14,000.00 : not available locally                                    |
| 22) Spectrophotometer                           | : TITERTEK- MULTISCAN        | : replacement of one : defective filter                            | : filters : 405nm  | : 5,000.00 : not available   |

ANNEX III  
EQUIPMENT FOR SUPPLEMENTAL TECHNICAL GUIDANCE

| Equipment/Donor                         | Specification                    | AFTER CARE                     |  |                | Availability          |
|---|----------------------------------|--------------------------------|--|----------------|-----------------------|
|   |                                  | Repair Specifications Needed   | Spare Parts Replacement/Specifications | Estimated Cost |                       |
| 23) Thermomixer                         | THERMONICS TM-300                | 450 nm                         | same model                             | 2,500.00       | not available locally |
| 24) Distiller/Ion-Exchange apparatus    | MILLI RO/G MILLIFORE             | defective controller           | to fit model                           | 12,500.00      | Available locally     |
| 25) Auto still                          | Yamato WA-550                    | defective condenser            | to fit model                           |                | Available locally     |
| 26) Ordinary microscope                 | Nikon                            | defective objectives           | to fit model                           | 5,000.00       | Available locally     |
| 27) Vacuum pump                         | AKI NINDON                       | unserviceable, for replacement | HP 1/6, 220V                           | 20,000.00      | equivalent available  |
| 28) CO2 Regulator (4 units)             | (Check)                          | for replacement                |  | 24,000.00      | equivalent available  |
| 29) Vacuum Evaporator                   |                                  | Penning Gauge W-IP; K-359000   |  | 35,000.00      | locally available     |
| 30) Calibrated Pellet Mill              | Miyasaka DWG NO 68               | 10-Ring FAM-SAM                |  | 165.00         | locally available     |
| 31) Hammer Crusher                      | CLEA                             | needs repair                   |  | 5,000.00       |                       |
| 32) Positive/negative pressure isolator | HANKI, SFi-6 and sterilizing box | hepa filter assembly           |  | 5,000.00       |                       |

ANNEX III  
EQUIPMENT FOR SUPPLEMENTAL TECHNICAL GUIDANCE

| Equipment/Donor                            | Specification             | Repair Specifications | Spare Parts Needed | Replacement/ Specifications | Estimated Cost | Availability           |
|--|---------------------------|-----------------------|--------------------|-----------------------------|----------------|------------------------|
| AFTER CARE                                 |                           |                       |                    |                             |                |                        |
| 33) Stereoscope Mill                       | Olympus VMZ 257040        | 6V20W HAL             |                    | busted Halogen bulb         | 5,000.00       |                        |
| 34) Phase Contrast Microscope Attachment   | Olympus BH-2 (Attachment) | BH-22 RFL-6           | reflected light    |                             | 150,000.00     |                        |
| SUB TOTAL                                  |                           |                       |                    |                             | 1,099,915.00   |                        |
| 8. NEW EQUIPMENT                           |                           |                       |                    |                             |                |                        |
| 1. Sechrist ventilator (volume ventilator) |                           |                       |                    |                             | 229,977.70     | locally available      |
| 2. Pulse Oximeter with printer             |                           |                       |                    |                             | 37,570.00      | locally available      |
| 3. Syringe Infusion pumps                  |                           |                       |                    |                             | 34,999.90      | locally available      |
| 4. ELISA plate washer                      |                           |                       |                    |                             | 20,000.00      |                        |
| 5) -70 C deep freezer                      |                           |                       |                    |                             | 380,000.00     |                        |
| 6) Zonal Assembly                          |                           |                       |                    |                             | 500,000.00     |                        |
| 7) Benchtop freeze                         | 14.5 L capacity           |                       |                    |                             | 134,750.00     | not available; locally |
| 8) CO2 Incubator                           | 148 L Capacity            |                       |                    |                             | 124,150.00     | locally available      |
| 9) Ultra low freezer                       | 830x942x1616 mm           |                       |                    |                             | 154,350.00     | locally available      |
| 10) refrigerated centrifuge                |                           |                       |                    |                             | 300,000.00     | Available; locally     |
| 11) Analytical balance                     |                           |                       |                    |                             | 110,000.00     | Available; locally     |
| 12) Ultrasonic disruptor                   |                           |                       |                    |                             | 90,000.00      | Available; locally     |
| 13) PCR machine with                       |                           |                       |                    |                             |                | Not available;         |

ANNEX III  
EQUIPMENT FOR SUPPLEMENTAL TECHNICAL GUIDANCE

| AFTER CARE            |               |   |            |
|-----------------------|---------------|---|------------|
| Equipment/Donor       | Specification | Repair Specifications : Spare Parts : Replacement/ : Estimated : Availability : | Cost       |
|                       |               | Needed : Specifications :   |            |
| accessories           |               |   | locally    |
| Thermocycler          |               |   | locally    |
| (Perkin-Elmer/        |               |   |            |
| Cetus 9600)           |               |   | 312,000.00 |
| Richad Model          |               |   |            |
| 200/2.0 FS            |               |   | 18,070.00  |
| Richad Sub-Cell       |               |   |            |
| electrophoresis       |               |   |            |
| cell                  |               |   | 10,270.00  |
| BioRad UV Trans-      |               |   |            |
| illuminator           |               |   | 5,200.00   |
| KODAK photography     |               |   |            |
| system                |               |   | 15,000.00  |
| BioRad BioDot SF      |               |   |            |
| slot blot             |               |   | 10,400.00  |
| apparatus             |               |   |            |
| Autoclave pipettors:  |               |   |            |
| 2 Eppendorf Q-20:     |               |   | 13,520.00  |
| ul                    |               |   |            |
| 2 Eppendorf Q-        |               |   | 13,520.00  |
| 100 ul                |               |   |            |
| 1 Eppendorf Q-        |               |   | 6,760.00   |
| 1000 ul               |               |   |            |
| 2 stands              |               |   | 6,240.00   |
|                       |               |   |            |
| 14) Ultra Microtome   | Model MT2-B   |   | 70,000.00  |
| "Porter Blum"         | (Hitachi)     |   | locally    |
|                       |               |   |            |
| 15) Mouse cage CL-    |               |   |            |
| 0104-1 215x320x       |               |   |            |
| 130 mm PC             |               |   |            |
|                       |               |   |            |
| 16) Mouse cage CL-    |               |   |            |
| 0201-(A) 225x325:     |               |   |            |
| 110 mm                |               |   |            |
|                       |               |   |            |
| 17) Watering bottle   |               |   |            |
| CL-0915(CK-250)       |               |   |            |
| 250 cc                |               |   |            |
|                       |               |   |            |
| 18) boiler (small)    |               |   |            |
| for pellet mill use:  |               |   |            |
|                       |               |   |            |
| 19) Vacuum cleaner    |               |   |            |
| CL-4801 (Drv)         |               |   |            |
| Hitachi               |               |   |            |
|                       |               |   |            |
| 20) Dissecting-Opera- |               |   |            |



(5) 研究所活動概要

RITM (1981-1991): A DECADE OF RESEARCH TOWARDS INFECTIOUS  
DISEASE CONTROL

The Research Institute for Tropical Medicine (RITM) was established in 1981 as a research facility of the Department of Health to reduce the burden of illness and the number of deaths caused by infectious tropical diseases through effective and efficient methods of prevention, diagnosis and treatment. RITM's main building, with its initial equipment, was donated by the Government of Japan through the Japan International Cooperation Agency. In 1989, the Institute's Center for Training in Tropical Infectious Diseases was built through another grant-in-aid from the Japanese government.

The RITM uses a three-pronged drive in its efforts to help contain the spread of infectious tropical diseases: research, technology transfer, and service. It plans and implements tropical medicine research programs focusing on deadly diseases that threaten our lives and the country's socio-economic well-being: acute respiratory infections, diarrheal diseases, schistosomiasis, human immunodeficiency virus infection, malaria, viral hepatitis, leprosy, dengue, rabies, poliomyelitis and other vaccine-preventable diseases, and tuberculosis. Answers to important questions regarding these diseases are sought through a multidisciplinary approach using the tools available in epidemiology, microbiology, parasitology, immunology, clinical medicine and the social sciences.

During its 10 years of existence, RITM has emerged as one of the leading research institutions of the country and is gaining international recognition as a research center which addresses developing-country priority health problems. The most recent proof of this recognition is the five-year grant award which RITM received from the U.S. National Institutes of Health for the establishment of a tropical medicine research center in 1991. As one of only three recipients of this grant among developing-country institutions worldwide, RITM will pursue more vigorously its research programs on schistosomiasis, leprosy and malaria in collaboration with U.S. scientists and DOH field personnel.

## RITM

### SERVICES

- 0 NATIONAL REFERENCE CENTER FOR HIV (AIDS VIRUS) TESTING
- 0 NATIONAL REFERENCE LABORATORY FOR POLIO ERADICATION
- 0 REFERRAL CENTER FOR MANAGEMENT OF PROBLEMATIC INFECTIOUS DISEASE CASES (INCLUDING AIDS)
- 0 COORDINATING CENTER FOR SURVEILLANCE OF ANTIBIOTIC RESISTANCE
- 0 SURVEILLANCE CENTER FOR NOTIFIABLE INFECTIOUS DISEASES
- 0 EXCELLENT LABORATORY FACILITIES OFFERING MODERN DIAGNOSTIC TECHNIQUES IN VIROLOGY, BACTERIOLOGY, PARASITOLOGY, IMMUNOLOGY, PATHOLOGY

### TECHNOLOGY TRANSFER

- 0 LABORATORY TRAINING IN BACTERIOLOGY, VIROLOGY AND PARASITOLOGY
- 0 FELLOWSHIP IN INFECTIOUS DISEASES (IN PARTNERSHIP WITH UP-PGH)
- 0 ROTATING RESIDENCY IN CLINICAL INFECTIOUS DISEASES
- 0 MANPOWER DEVELOPMENT FOR INFECTION CONTROL TEAMS OF DOH REGIONAL HOSPITALS/MEDICAL CENTERS (in partnership with UP-PGH)
- 0 TRAINING COURSES ON HIV/AIDS
- 0 THIRD COUNTRY TRAINING PROGRAM: LABORATORY COURSES ON ACUTE RESPIRATORY INFECTIONS AND DIARRHEAL DISEASES FOR WESTERN PACIFIC AND OTHER ASIAN COUNTRIES

RESEARCH AGENDA

RESEARCH PROGRAM

ACCOMPLISHMENTS

CURRENT THRUSTS

- |   |  |
|---|--|
| <p>1. ACUTE RESPIRATORY INFECTIONS</p> <ul style="list-style-type: none"> <li>o Development of an ARI control program and its integration into existing maternal and child health services in Bohol</li> <li>o Cost-effectiveness analysis of ARI control program in Bohol</li> <li>o Assessment of feasibility of integrating ARI control program into existing services in urban setting</li> <li>o Epidemiology and etiology of ARI in urban/rural settings</li> <li>o Better understanding of disease pathology, determinants, and outcome</li> <li>o Acquisition of improved methods of detecting etiologic agents</li> <li>o Effect of breastfeeding on ARI morbidity</li> <li>o Establishment of best ARI laboratory services in the country</li> <li>o Role of vitamin A in decreasing ARI mortality</li> </ul> | <ul style="list-style-type: none"> <li>o immunogenicity trials using new ARI vaccines (in preparation for vaccine field trials)</li> <li>o surveillance of drug resistance of bacterial pathogens</li> <li>o assessment of alternative treatment regimens</li> <li>o improved clinical diagnostic criteria for ARI in infants &lt; 3 months of age</li> <li>o development of improved strategies for educating mothers and health workers</li> </ul> |
| <p>2. VIRAL HEPATITIS</p> <ul style="list-style-type: none"> <li>o Development and production of reagents for hepatitis B using local raw materials</li> <li>o Vaccine field trials to determine most efficacious regimen for immunizing children</li> </ul>  | <ul style="list-style-type: none"> <li>o field evaluation of effectiveness and feasibility of integrating hepatitis B immunization into existing EPI</li> <li>o epidemiology of newer viral hepatitises (ex. hepatitis C)</li> <li>o development of other laboratory diagnostic tools for viral hepatitis</li> </ul>   |

RESEARCH PROGRAM

ACCOMPLISHMENTS

CURRENT THRUSTS

3. AIDS
- o Surveillance of high-risk groups
  - o Development and field evaluation of educational strategies for high-risk groups and health workers
  - o Development of cost-effective approaches to HIV testing
  - o Establishment of the National Reference Center for HIV testing
  - o Establishment of a referral center for clinical care/counseling of HIV-infected individuals
  - o Cost-effectiveness analysis of blood banking system
  - o Evaluation of testing kits prior to licensing and distribution
  - o Implementation of the WHO-MDT regimen among leprosy patients
  - o Serological monitoring of the efficacy of the WHO-MDT regimen among leprosy patients
4. LEPROSY
- o Expansion of surveillance activities
  - o Better understanding of the epidemiology and clinical presentation of HIV infection
  - o Determination of cofactors influencing course of HIV infection
  - o Development of strategies for the assessment of HIV testing practices
  - o Development and testing of new educational strategies
  - o Screening of newer alternative bactericidal drugs for MDT in the treatment of leprosy
  - o Comparison of bactericidal activity & pharmacokinetics of sparfloxacin, a new generation of quinolones, and ofloxacin

RESEARCH AGENDA

CURRENT THRUSTS

ACCOMPLISHMENTS

RESEARCH PROGRAM

- 4. LEPROSY
    - o Subclinical detection of M. leprae infection among high risk groups by ELISA & gelatin particle agglutination test
    - o Seropidemiological study of M. leprae infection in an urban community
    - o Field evaluation & applicability of serological testing in Cutlon, Palawan for early detection of leprosy, monitoring of response to treatment & relapse
  - 5. SCHISTOSOMIASIS
    - o Epidemiology of schistosomiasis in Layta
    - o Field evaluation and monitoring of mass chemotherapy using praziquantel in terms of impact on morbidity childhood growth and development
    - o Field testing of tools for detecting/monitoring disease (e.g. use of ultrasound)
- 
- o clinical trial of new bactericidal drugs for leprosy (sparfloxacin & clarithromycin) and establishment of new assays (eg. radio-metry) to determine bactericidal activity
  - o Evaluation of new laboratory techniques, PCR, dot blot ELISA for early detection of sub-clinical leprosy, or treatment failure, or relapse
  - o Development of improved strategies for case finding and case
  - o Identification of important epidemiologic factors relevant to the leprosy control program
  - o Vaccine development
  - o Development of improved diagnostic methods
  - o Development of cost-effective strategies for control

RESEARCH AGENDA

CURRENT THRUSTS

ACCOMPLISHMENTS

RESEARCH PROGRAM

5. SCHISTOSOMIASIS

- o Improved understanding of pathogenesis and immunity
- o Development of protective monoclonal antibodies in animal model
- o Assessment and upgrading of skills of DDH microscopists

6. MALARIA

- o Conduct of clinical trials on new anti-malariaials
- o Outbreak investigations
- o Operations research documenting problems in existing field services
- o Improved capabilities/facilities for in vitro/in vivo drug sensitivity assays of malarial parasites
- o Improved capabilities to conduct entomological surveys, identification and assessment of vectorial capacity of different mosquito spp
- o Better understanding of epidemiology/dynamics of transmission
- o Development of cost-effective control strategies
- o Development of improved diagnostic methods
- o Monitoring of drug resistance
- o Establishment of the bionomics of vectors and its influence on malaria transmission
- o Better understanding of sociobehavioral factors influencing disease transmission

## RESEARCH AGENDA

### RESEARCH PROGRAM

#### 7. DIARRHEAL DISEASES

#### ACCOMPLISHMENTS

- o Better understanding of local epidemiology of childhood diarrhea (i.e., morbidity patterns, causes, risk factors) providing data supportive of existing national CDD policies
- o Documentation of cost-effectiveness of oral rehydration treatment (ORT) in diarrhea training units
- o Improved understanding of urban mothers in caretaking practices (esp. infant feeding and management of diarrhea) and their determinants
- o Acceptability of new ORS formulations in field setting
- o Field testing of preventive interventions (e.g. improvement of infant feeding practices)
- o Establishment of the best diarrheal laboratory services, in the country

#### CURRENT THRUSTS

- o Development/testing of better strategies for educating mothers on household management of diarrhea
- o Development/testing of better strategies for improving diarrhea management in health facilities
- o Molecular epidemiology of antibiotic resistance among enteric pathogens
- o Improved understanding of rotavirus diarrhea

RESEARCH AGENDA

RESEARCH PROGRAM

ACCOMPLISHMENTS

CURRENT THRUSTS

B. RABIES

- o Analysis of the costs and benefits of a national rabies elimination program
  - o Comparative evaluation of a new immunoenzymatic test (RREID) with currently used diagnostic tests (DME and FAT) for dog rabies
  - o Establishment of a well-equipped animal rabies diagnostic facility
  - o Documentation of the current situation of rabies in the Philippines
  - o Application of the WHO/EPI cluster survey methodology to assess mass canine vaccination programs
- o Development of alternative strategies to implement a canine rabies elimination program
  - o Identification of strategies to lower the cost of a national control program
  - o Improvement of surveillance to document epidemiologic trends of animal and human rabies
  - o Improvement of current diagnostic capabilities
  - o Improvement of rabies post-exposure patient management

3. 收集資料一覽表

(1) 熱帶医学研究所 (R I T M) 年報 (1987~90)

(2) 熱帶医学研究所 (R I T M) 業務報告 (Accomplishment Report) (1991)

(3) Philippine Health Statistics 1989. Health Intelligence Service.

DOH. Manila

JICA