



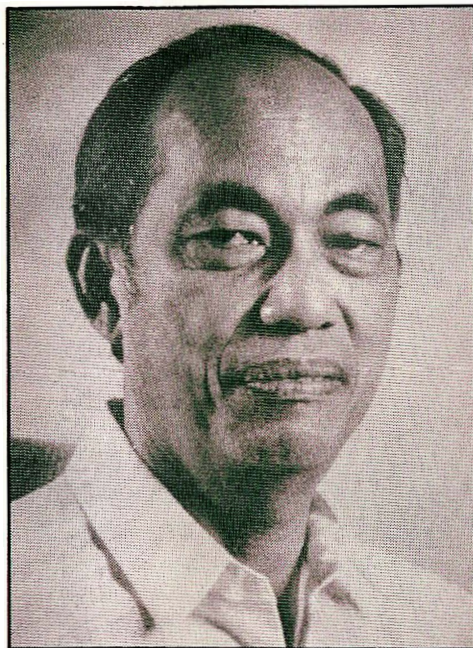
1989 Annual Report

Philippine Council for Health Research and Development

Department of Science and Technology
Bicutan, Taguig, Metro Manila

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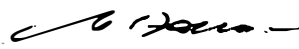
Recognition and participation of science and technology in the mainstream of the country's economic development had been my battlecry even before I assumed office as DOST Secretary on April 1989. I had espoused this in many fora: within the DOST system, in Cabinet, Congress, among business and professional groups, down to the local government officials and constituents.

Armed with the recommendations of the Presidential Task Force on S & T, I immediately mobilized the system to implement with public and private sector partners the action programs for the 15 leading edges in which we have comparative advantages. At the same time, internal housekeeping was done to ensure that the DOST machinery acts in a concerted effort towards realizing our target as Newly Industrialized Country (NIC) by the Year 2000.

We have on our side the political will of the national leadership as evidenced by the cabinet-level Science and Technology Coordinating Council and a seat in the NEDA Board. At the same time, our people are willing to adjust to a market-oriented approach without sacrificing their scientific objectivity. We, therefore, have the necessary support to propel us into action.

In the social service sector where health belongs, this market orientation is even more difficult to grapple with. PCHRD, however, is meeting the challenge head-on. Its inputs in the pharmaceutical and biotechnology sectors are crucial, as is true with its concern for the nutrition of the vulnerable groups, and the environmental and occupational health of the people manning the industrial enterprises and the community who will reap the fruits of economic growth.

As Chairman of PCHRD's Governing Council I assure you that I am equally committed to both sides of this industrialization drive specially your concern for improving the quality of life. I am sure you and I stand to benefit from our complementary backgrounds - towards making the '90s a decade when S & T becomes a household word.


CEFERINO L. FOLLOSCO
Chairman
Governing Council

MESSAGE

My report focuses on the highlights of 1989.

The year started with the Department of Science and Technology hosting the Southeast Asian Science and Technology Week on 31 January - 3 February 1989. This gave our local scientific community the opportunity to interact with their counterparts in the region as well as with prominent scientists worldwide. PCHRD took charge of the scientific sessions.

On April 1989, a change of DOST leadership was seen with Secretary Ceferino L. Follosco assuming the top post. A marketing and production man tapped from the private sector, he brought with him a progressive vision of S & T playing an active role in the country's economic development. The establishment of the Cabinet-level Science and Technology Coordinating Council and a seat in the NEDA Board added clout to S & T's visibility, now noticeable even in the media. President Aquino, herself, enunciated government's S & T thrust in her 1989 State-of-the-Nation address.

The health sector prepared itself to be online with the new thrust. Its particular contributions in the identified 15 leading edges which will propel the country's industrialization drive are on pharmaceuticals and biotechnology.

Equal emphasis on impacts to health care delivery and economic growth was placed on research projects evaluation. Among those with market potentials from the 28 supported projects from the regular scheme were hepatitis B virus diagnostic kit, IV fluids, and medicinal plant tablets. Technology transfer activities were negotiated with the Technology Application and Promotion Institute and

Health Products Development Group Foundation. **Concerns for researches which will generate soft technologies are still being pursued.**

Twenty-five (25) research projects were undertaken via the Regional Research Fund scheme in Regions 6, 7, 8 and 11. Meanwhile, six collaborative projects were done in the Ermita Health Science Community (NCR). A fifth Regional Health Research and Development Committee (RHRDC) was formed for Northern Luzon's Regions 1, 2 and Cordillera Autonomous Region. Assistance for two PhD and 10 Masteral students was also extended.

Building up the information support systems was Health Research and Development Information Network (HERDIN) thrust as it introduced in seven regions new technologies like computerized databases and MEDLINE on CD-ROM that assist researchers as well as information professionals in servicing information requests. The integrated HERDIN database at year's end contained 2000 entries. The same number was also available in the Asia-Pacific Information Network on Medicinal and Aromatic Plants (APINMAP) database.

Information dissemination took in the form of 18 publications produced and distributed to 7,000 individuals and institutions, and scientific symposia and press conferences which benefited over 1,000 people.

Linkages and resource generation activities generated additional finances from WHO (P93,069), Commission on Health Research for Development (P105,000), Drug Association of the Philippines (P30,000), UNESCO (P40,000) and POPLINE (P20,000). Twelve proposals were packaged for



foreign funding.

PCHRD's role in the health research community was further boosted with WHO's reference to the Council as a model for a research council set-up for developing countries, and HERDIN as a progressive information system approach in the Western Pacific Region.

In the coming years, extra efforts will be exerted towards generating resources from outside sources to finance priority programs. This means that inhouse expertise in proposal development and packaging will have to be honed. Also, as the council's sectoral coordination task expands, especially with the joint DOST-DBM research evaluation scheme in place, operational and practical linkages will be worked out for its effective and efficient implementation.

A handwritten signature in dark ink, appearing to read 'Pacita L. Zara' followed by a long horizontal flourish.

PACITA L. ZARA, M.D.

Officer-in-Charge
Office of the Executive Director

EXECUTIVE DIRECTOR'S REPORT



Research products with market potentials: hepatitis B virus diagnostic kit and medicinal plants.

TECHNOLOGY

Intravenous Fluids

A feasibility study on the commercial production of intravenous fluids using DOST technologies was completed. At P1.8 M liter full capacity, a P21 M investment is recouped at Year 6 at industry standard return on investment (ROI) of 15% - a P10.00 saving is expected per liter.

Medicinal Plants

Extensive diffusion of the medicinal plants technology consisting of the scientifically-validated traditional use of herbal medicine, and tablet production of *lagundi*, *tsaang gubat*, *sam-*

bong, and *yerba buena* was made through video documentary, exhibits, and technical and popular brochures. Initial results of studies made on four additional herbal plants were disseminated through scientific symposia. These plants include *ampalaya* (antidiabetic), *akapulko* (antifungal), *ulasimang bato* (antiinflammatory) and *bawang* (antihypertensive).

Training on the cultivation, propagation and preparation of medicinal plants was given to some 3,750 teachers and students in Davao City by the Institute of Small Farms and Industries, Ateneo de Davao University in cooperation with the Department of Education,

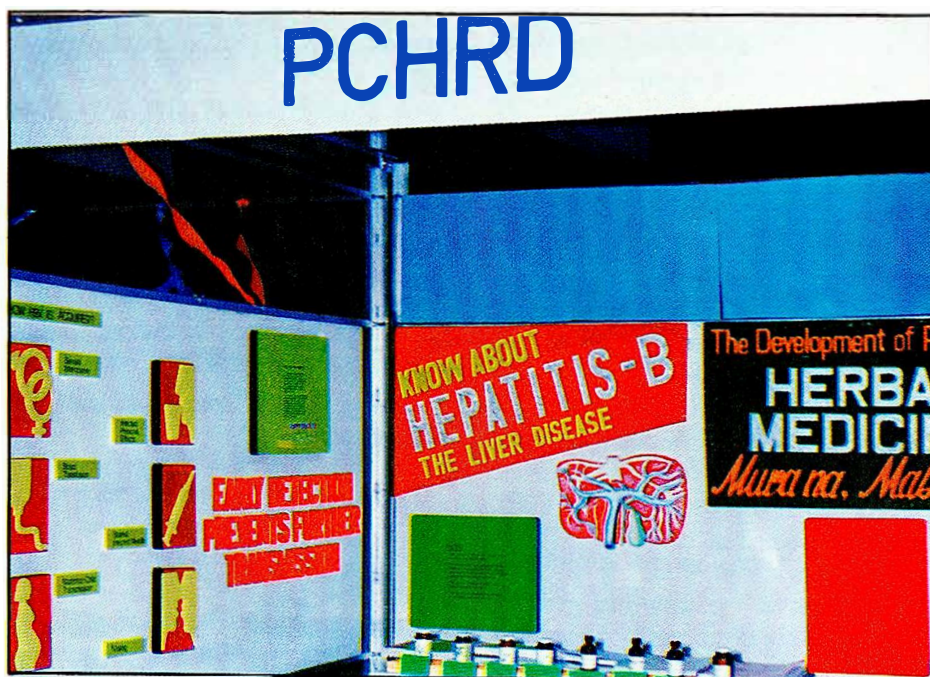
Culture and Sports regional office.

Studies on the conversion of the Bicutan Pilot Plant as one of the technology incubators in the Bicutan complex were initiated with the Technology Application and Promotion Institute, Department of Science and Technology (TAPI-DOST).

Hepatitis B Virus Diagnostic Kit

Preliminary negotiations on the commercialization of the hepatitis B virus diagnostic kit using two packaging presentations were made with representatives of the Department of Health, Research Institute for Tropical Medicine, University of the Philippines - Philippine General Hospital, and TAPI-DOST.

A Technology Diffusion and Commercialization Program was instituted by PCHRD, starting with its supported projects. This program enables the Council to identify even at the proposal stage valuable research results, whether information or product-based. Health Products Development Group Foundation are tapped while business opportunities are also explored with TAPI-DOST.



PCHRD participates in the DOST permanent exhibit at TAPI.

TRANSFER

Twenty-nine (29) R & D projects under seven program areas (communicable diseases, nutrition, maternal and child health, medicinal plants program, degenerative and metabolic diseases, environmental health, and policy studies) were monitored and evaluated with assistance from consultants to determine progress of operations, pinpoint problems and adopt measures to ensure continued project activities. These are as follows:

PHARMACEUTICAL/ PHARMACOLOGICAL

* Pesticide Bioefficiency and Residue Analysis in Philippine Medicinal Plants

VIRGINIA R. OCAMPO, Ph.D.
National Crop Protection Center
UP at Los Banos
(status: completed)

Pesticide bioefficiency trials, during the dry season, were conducted. Results showed that among the insecticides used for *lagundi*, monocrotophos and cypermethrin were found to be most effective as they gave the lowest number of insects collected compared to control plots. Among the fungicides used in *lagundi*, mancozeb significantly reduced incidence of plant disease. On the other hand, deltamethrin may be considered the most effective pyrethroid insecticide against plots of *sambong* and *tsaang gubat*.

* Pharmacologic and Toxicologic Studies for Medicinal Plant Products

HORACIO R. ESTRADA, M.D.
Department of Pharmacology
UP College of Medicine
(status: ongoing)

The project established LD₅₀ value on four batches of *sambong* powder (132.46 g/kg up to 200 g/kg) and on *sambong* tablets which showed no death occurring up to 200 g/kg. Likewise, on three batches of *ulasimang bato* powder (21.33 g/kg up to 41.48 g/kg) and on three batches of *ulasimang bato* syrup, findings showed no death occurring up to 373 g/kg.

Bronchodilating effect tests in fractions of *lagundi* using acetylcholine antagonism showed all samples exhibited bronchodilating effect.

* Establishment of Quality Control Bioassay Procedures for Medicinal Plant Products

ROMEO F. QUIJANO, M.D.
Department of Pharmacology
UP College of Medicine
(status: ongoing)

The project developed a plethysmometer set-up to test antiinflammatory effect on selected plants. It conducted comparative study on the effectiveness of carageenan, egg white, and yeast as edema inducers. Results indicated both egg white and yeast with significant edema formation, however, carageenan still proved to be a more powerful edema inducer.

Bioassay and LD₅₀ tests conducted showed the following results: a) using three doses each of *sambong* leaves and tablets, significant diuretic effect of the tablet were observed at

dose 13.3 gm/kg while the leaves at all doses (1.25 gm/kg, 13.3 g/kg and 7.86 gm/kg); b) *ulasimang bato* showed antiinflammatory effect at 20 gm/kg in rats and 10 gm/kg in mice; c) LD₅₀ value obtained for *akapulko* powder/ lotion showed no death occurred at highest dose level; for *ipil-ipil* suspension at 3.45 g/kg; three batches of *ampalaya* powder at 67.7 gm/kg up to 109.23 g/kg; and for *ampalaya* capsules at 15.2 gm/kg.

* Clinical Screening and Validation Studies of Medicinal Plant Products Used in Traditional Folk Medicine

NELIA C. MARAMBA, M.D.
Department of Pharmacology
UP College of Medicine
(status: ongoing)

An antihypertensive effect of garlic capsules was conducted on 20 patients. Results showed garlic capsules were effective for treatment of mild hypertension with few adverse experiences noted.

The efficacy and acceptability tests of *sambong* tablets on three patients with urinary tract infection was also conducted. Initial results showed no apparent relief or passage of stone. Further clinical studies are scheduled to be carried out.

* Dosage Forms from Medicinal Plant Constituents

NATIVIDAD F. DE CASTRO, Ph.D.
UP College of Pharmacy
(status: on-going)

The following dosage forms were formulated for R & D of other NIRPROMP projects: *ampalaya* capsule,

RESEARCH AND

ulasimang bato syrup, *ipil-ipil* suspension and *akapulko* lotion (improved formulation), and *sambong* tablets (for clinical trials as antiglaucoma and for kidney stones).

Microbial test was undertaken to screen dosage forms for clinical trials. A special study was also conducted to set up standards for microbial limit for medicinal plant products. Quality control specifications on *lagundi*, *tsaanggubat*, *sambong*, and *yerba buena* are ongoing.

*** Phytochemistry of *vitex negundo* J.**

FABIAN M. DAYRIT, Ph.D.
Philippine Institute of Pure and
Applied Chemistry
Ateneo de Manila
(status: ongoing)

HPLC procedures for analysis of compounds were completed. Active compounds from *lagundi* fractions were purified and submitted for pharmacologic testing. Metal analysis on *lagundi*, *akapulko*, *sambong* and *ipil-ipil* showed that all heavy metals were within tolerable limits. Quantitative analysis of constituents in the active fractions of *lagundi* under four agricultural conditions was partially conducted.

*** Mutagenicity, Clastogenicity and Antimutagenicity Potentials of Drug Preparation from Philippine Medicinal Plants**

CLARA S. SYLIANCO, Ph.D.
Department of Chemistry
UP College of Science
(status: ongoing)

Rec assay, ames, host mediated assay, micronucleus and antimutagenicity tests were conducted on the following:

ipil-ipil (seeds) decoction and suspension, *damong maria* decoction, *ampalaya* (tops) decoction and capsule, *ulasimang bato* syrup, *akapulko* lotion (improved formulation). Results showed that all the samples were non-mutagenic, non-clastogenic and possessing antimutagenic property.

*** Establishment and Maintenance of a Medicinal Plants Production Farm**

RODEL G. MAGHIRANG
Institute of Plant Breeding
College of Agriculture
UP at Los Banos
(status: ongoing)

Approximately 300 species of medicinal plants are being maintained in the gene bank. Supplies of dried *lagundi* (2kg), fresh *akapulko* (11.26kg), dried *akapulko* (13.14 kg), dried *ipil-ipil* seeds (23.69 kg), dried *ulasimang bato* (2.65 kg), fresh *ulasimang bato* (13.76 kg), dried *ampalaya* tops (3.9 kg), fresh *ampalaya* tops (42.5 kg), and dried *sambong* leaves (14.92 kg) were provided for NIRPROMP.

New batches of *akapulko*, *yerba buena*, and *sambong* plants, and *ampalaya* seedlings were transplanted and replanted.

Complete fertilizer study done on *lagundi* showed that triple 14 at 80 kg/plant gave the highest herbage yield followed by chicken manure at 2 kg/plant. Weeding, pruning and irrigation activities were carried out including fertilization and pesticide application to effectively control insect infestation on the plants.

*** Penicillin from Philippine Carbohydrate Raw Materials**

ASUNCION K. RAYMUNDO
National Institutes of
Biotechnology and Applied
Microbiology (BIOTECH)
(status: new)

The project will evaluate the penicillin-producing capability of *Penicillium chrysogenum* strains available at BIOTECH and the suitability of molasses, sugarcane juice, raw sugar, and glucose as substrates for penicillin production.

MATERNAL AND CHILD HEALTH

*** Human Milk in the Feeding of Prematures and Low Birth Weight Infants**

AMELIA R. FERNANDEZ, M.D.
Department of Pediatrics
UP-PGH Medical Center
(status: completed)

The prospective study was done to establish the suitability of breast milk for 122 prematures and low birth weight infants, divided into breast fed and bottle fed groups. All subjects showed significant growth although the breast fed infants tended to be heavier. The type of feeding did not have any effect on physical growth as well as in biochemical and hematologic parameters in the first 4-months of life. There was no demonstrable difference in the incidence of relatively mild infections in the immediate neonatal period.

Overall, it is safe to conclude that breast milk is a suitable source for

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optimal nutrition in the first 4-months of life for low birth weight infants.

*** Interruption of Maternal-Child HBV Transmission: A Comparative Study of Efficacy of Three Regimens of HBsAg Vaccines Plus HBIG**

AUGUSTO L. LINGAO, M.D.
Liver Study Group
UP College of Medicine
(status: ongoing)

A total of 53 infants of HBsAg positive mothers were followed up. Five were given HBIG plus one dose (10 mg) of Kitasato Hepatitis B vaccine, six were given HBIG plus three doses of vaccine (10-5-5 ug) at monthly intervals. Of the 15 infants of HBsAg (-) mothers, nine were given 1 x 10 ug vaccine without HBIG and six were given three monthly doses (10-5-5 ug) without HBIG.

For infants with anti HBe (+) mothers, 27 were given 1 x 10 ug vaccine without HBIG. For infants of HBsAg (-) mothers, 10 were given 10 ug at 0-2-6 month schedule, 10 infants given 10 ug at 0-1-2 month schedule and 12 infants given 10-5 ug at 0-1-2 schedule. A total of 37 infants were also immunized with the new Kitasato regimen.

*** A Health Education Program to Promote Breastfeeding and Improve Weaning Practices: Its Effects on Infant Feeding and ARI Morbidity in the First Year of Life**

MARY ANN D. LANSANG, M.D.
Research Institute for Tropical
Medicine (RITM)
(status: ongoing)

A total of 930 pregnant mothers were recruited of which 471 were placed under the experimental area and 459 in

the control area. By the end of September, however, 201 (21.6%) pregnant mothers dropped out. Because of high attrition rate, recruitment of pregnant mothers continued until November. Sixty-nine mother counsellors were also trained for the project.

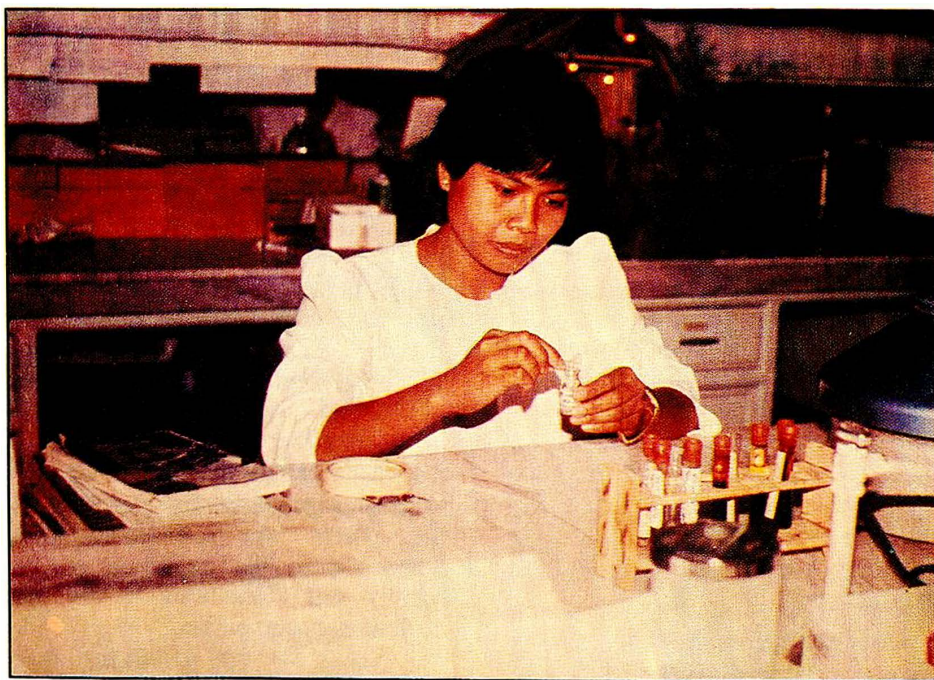
Pre KAP survey on breastfeeding covering the 930 recruited pregnant mothers was conducted. A pre KAP survey on weaning was also carried out covering 165 mother-infant pairs. Mother-infant pairs were recruited for ARI morbidity monitoring. Two updates on infants' feeding mode were done at 1st and 3rd month of age. The first ARI morbidity surveillance during the peak season (June-August 1989) was conducted. Health education program in the five study areas is ongoing.

*** Simple Laboratory Test in the Diagnosis of Sepsis Neonates**

XERXES R. NAVARRO, M.D.
RITM
(status: on-going)

A total of 101 patients clinically diagnosed as sepsis neonatorum were enrolled in the study. Definite sepsis based on positive blood, urine or CSF aerobic culture, was seen on 50 cases. The remaining cases were categorized under "probable" sepsis neonatorum based on a negative bacteriologic culture (blood, CSF and urine) but with clinical signs and symptoms with documented risk factors and/or with strong evidence of infection.

Among the five diagnostic tests, C-reactive protein has the highest rate of positivity among those with positive cultures. A striking finding is the high rate of positivity of toxic granulations in patients with definite sepsis.



Laboratory test for HBsAg positive.

RESEARCH AND

COMMUNICABLE DISEASES

* Experimental Infection of Mosquitoes with Malarial Parasites

NELIA P. SALAZAR, Ph.D.
RITM
(status: completed)

Project accomplishments include: successful colonization and infection of *Anopheles litoralis* with *Plasmodium falciparum* gametocytes, demonstration of gametocytocidal activity of clindamycin, and application of diagnostic techniques e.g. G-6-PD assays, immunofluorescent antibody test and *in vitro* microtest for drug sensitivity.

At present, laboratory-bred mosquitoes are used in tests of neem (*Azadirachta indica*), a botanical insecticide, as a prospective vector control agent. Experimentally infected mosquitoes serve as controls in immunoradiometric assays for malaria detection.

* Pilot Manufacture of Hepatitis B Virus (HBV) Reagents and Raw Materials for HBV Vaccine

AUGUSTO L. LINGAO, M.D.
Liver Study Group
UP College of Medicine and
RITM

(status: ongoing)

A total of 22,040 RPHA tests for HBsAg were produced during the year. The reagents were used by the Philippine National Red Cross (65%), the RITM Hepatitis Research Laboratory (25%), and the UP Liver Study Group (10%).



Experimental infection of mosquitoes from patients found positive for *P. falciparum* gametocytes.

DEVELOPMENT

*** Production of Antibiotic Sensitivity Disk in the Philippine General Hospital**

MELECIA M. ANTONIO-
VELMONTE, M.D.
UP-PGH Medical Center
(status: ongoing)

Fifty-four thousand (54,000) blank disks using nine kinds of antibiotics were produced. All quality control testings (performance, stability listing, assay procedures) on the initial batch of antibiotics were completed. The locally produced disks are being field tested at the Philippine General Hospital laboratories, the National Kidney Institute, the Lung Center of the Philippines and the Manila Doctors Hospital.

*** DNA and Monoclonal Antibody Studies in Hepatitis B Virus (HBV) Infection and Other Related Diseases**

MARITA V.T. REYES, M.D.
Department of Biochemistry
and Molecular Biology
UP College of Medicine
(status: ongoing)

Standardization of procedures for monoclonal antibody preparation was done. These are sample collection of plasma from patients with high titers HBsAg positive serum pooled into 50 ml, isolation and purification of HBsAg using zonal ultracentrifugation, and immunization of appropriate experimental animals using a 10 to 12 week old Balb/c mice.



Punching of paper disks for antibiotics.

RESEARCH AND

*** A Study on the Prevalence of Drug Resistant Mycobacterium Tuberculosis on the Socio-economically Depressed Communities in the Philippines**

ADELWISA R. ORTEGA, M.D.
UP College of Public Health
(status: ongoing)

KAP survey, and collection of sputum specimens/case finding activities were undertaken in Cavite. Identification of TB cases and prevalence of the disease in two classes of communities were also conducted. Drug sensitivity testing of TB isolates was done.

*** Surveillance of Nosocomial Infections and Antibiotic Efficacy in the Philippine General Hospital**

RAMON L. DE VERA, M.D.
UP-PGH Medical Center
(status: new)

The Department of Surgery of UP-PGH was selected as the initial pilot area. Two sets of infection surveillance forms, to be used as tools in data collection, were developed and pre-tested. Case finding activities were initiated. Report forms were also developed for the computerization of data, retrieval and analysis.

***The Use of Latex Agglutination Test for the Rapid Diagnosis of Tuberculosis Meningitis**

MANUEL P. MACAPINLAC, M.D.
Department of Biochemistry and Molecular Biology
(status: new)

The project will develop a fast method of diagnosing tuberculous

meningitis that has a better sensitivity than acid fast staining (APS) and culture.

NUTRITION

***Epidemiological Study of Goiter and Iodine Deficiency Disorders (IDD) in a Goiter Endemic Area for an IDD Control Program (Phases II and III)**

RODOLFO F. FLORENTINO, M.D.
Food and Nutrition Research
Institute, DOST
(status: new)

Dietary and socio-cultural interviews and observations had been started. Likewise, standardization of analytical procedures is being done.

*** Malnutrition-related Diabetes in Hospitalized Filipino Children**

CARMELITA F. DOMINGO, M.D.
UP-PGH Medical Center
(status: new)

During the first and second quarters of the project, 12 patients were enrolled and processed. Physical, laboratory, and radiographic examinations were conducted. Initial intravenous glucose tolerance tests were done.

Follow up of patients, as part of nutritional rehabilitation, is being done to monitor weight and height of the patients upon discharge from the pediatric ward.

DEGENERATIVE AND METABOLIC DISEASES

*** Development of Cheap, Stable Serum/Plasma Standards for Common Clinical Chemistry Determinations**

PROF. RHODORA C. ESTACIO
Department of Biochemistry and Molecular Biology, UPCM
(status: new)

The project will develop serum standards using indigenous materials in order to upgrade the quality of clinical chemistry determinations and develop the technology for the preparation of human/animal sera as controls/standards for conventional clinical chemistry/determination.

*** Population-based Cancer Registry**

CORAZON NGELANGEL, M.D.
UP-PGH Medical Center
(status: new)

Social preparation in the study area of Rizal was conducted, survey questionnaire developed and pre-tested, and interviewers recruited and trained. Collection of data in the different hospitals of Rizal had been started.

*** The Efficacy of Various Modalities of Treatment in the Different Subsets of Kidney Stones Formers**

MARIETA B. DE LUNA, M.D.
UP-PGH Medical Center
(status: ongoing)

Inventory of all urine samples collected and processed showed the predominant stones were calcium, uric

DEVELOPMENT

acid and mixed stones. There was an almost equal incidence between sexes in the calcium and mixed stones while male preponderance was seen in uric acid stones. Results of metabolic work-up showed that among 121 patients analyzed, renal leak abnormality was the most common (41%) and no metabolic abnormality (37%).

Analysis of the recurrence rate of patients showed that those who previously had *no recurrence* also ended up having no recurrence post therapy (83%). Most of those with *infrequent recurrence* also ended up with no recurrence after therapy (83%). Patients with frequent recurrence had a lower incidence of having no recurrence post therapy (33%).

Processing of the other batch of patients to meet the 170 target population is ongoing.

***A Prevalence Survey on Acute and Chronic Lung Diseases in Metro Manila**

CAMILO C. ROA, M.D.
UP-PGH Medical Center
(status: new)

San Andres Bukid was selected as the study area of the project. Orientation of municipal health officers was conducted and two post-board interns were hired to perform the interview and physical examination. Survey questionnaire was developed, translated to Filipino, pre-tested and finalized. Preliminary data collection had been started.

*** Strengthening of the Hospital-based Tumor Registry in UP-PGH**

MICHAEL J. LIQUETE, M.D.
UP-PGH Medical Center
(Status: new)

Patient information sheets were formulated, two registry clerks hired and trained for data collection, and initial data gathering from the Department of Radiology, Institute of Ophthalmology and Nuclear Medicine was done. A total of 3000 case findings were initially noted. Abstracting of records in the tumor section was also started. A system of hospital-wide perspective and continuing cancer registration is being formulated.

ENVIRONMENTAL HEALTH

*** Toxicologic Studies in Shellfish Involved in Paralytic Shellfish Poisoning in Manila Bay**

ERNESTO P. LUIS, Ph.D.
Industrial Technology Development
Institute, DOST
(status: ongoing)

Ten mouse bioassay tests were done to determine the level of toxicity of green mussels. Twelve water analyses were made to monitor the physico-chemical properties, including the chemical pollutants, of the immediate sea water environment where mussels sample collection is done. Likewise, 12 microbiological analyses were undertaken to determine the types and concentrations of various microorganisms in the sea water and mussels.

POLICY

*** Validation of Community Participation Indicators in Primary Health Care**

LEONCIO P. DELA CRUZ, MPH
Comprehensive Community Health
Program
(status: completed)

The project attempted to validate five indicators for community participation in Primary Health Care (PHC): representation, contribution, access to information, behavior towards PHC, and behavior towards PHC personnel. Results showed that the degree of participation in PHC activities is greater in urban communities than in rural. Although properly motivated to support PHC activities, the communities hardly had any means to extend monetary assistance. Majority of the respondents had favorable attitudes towards PHC but there is a need for continuous education and motivation. PHC personnel are accepted by the communities.

*** Pilot Testing of the Health Maintenance Organization (HMO) as a Health Care Financing Scheme**

MARILYN N. GORRA
INTERCARE Research
Foundation, Inc.
(status: ongoing)

Delivery of appropriate health care services to members have been initiated. These include outpatient consultation, outpatient drugs and medicines, diagnostics, inpatient care, and dental consultation. Trainings were conducted for HMO officers and staff, hospital staff, and community members

RESEARCH AND

on HMO operations. HMO information dissemination efforts and the organizational machinery for recruitment of HMO members were started.

To date, a total of 100 active members are enrolled at UP Diliman Employees' Health Maintenance Organization (UPHMO) and 323 at San Antonio Health Maintenance Organization (SAHMO).

*** Cooperative Rice Mill and Stores for Community-based People's Health Program**

EDDIE G. DOROTAN, M.D.
Lingap para sa Kalusugan ng Sambayanan (LIKAS)
(status: ongoing)

The cooperative rice mill and stores as income generating projects posted significant net income, signifying efficient surplus generating capability. Although the net income was below the targetted figures per feasibility study, they were good enough to help in partly financing a number of primary health care services at the community levels.

The People's Health Programs have been maintained, improved, and expanded to neighboring towns. As a result, utilization of primary health care services has been increased and expanded.

*** Evaluation of New Assays/Approaches for the Control of Health Program: Process Documentation of an Intervention Program for Acute Respiratory Infections in Children in an Urban Community**

SOCORRO P. LUPISAN, M.D.
RITM
(status: ongoing)

The project has completed its preparatory activities which included the recruitment of process observers, organization of working process documentation groups and preparation of tools for data collection. In the second phase, training of health providers and process observers were completed. The process observers were immersed in the field to familiarize themselves with the observation sites and data gathering.

The process documentation during the intervention program implementation period is in progress.

*** Towards More Effective Primary Health Care: Focus on the Municipal Health Officer**

PROF. JOSIE H. DE LEON
UP College of Arts and Sciences
(status: new)

Munos, Nueva Ecija; Guiuan, Samar; and Mati, Davao were chosen as project sites. Survey questionnaire were prepared and pre-tested. Interviews on the perception of PHC in the study area of Luzon was conducted among the beneficiaries.

DEVELOPMENT

The Council's human resources and institution development program is in consonance with its long-term objective of nurturing and strengthening health research capabilities of institutions engaged in health R & D. Underlying these activities is its thrust toward regionalization, i.e. building research capabilities in various regions of the country.

Human Resources Development

The Council provided assistance to two PhD students and 10 masteral students.

These courses are in support of the research programs being implemented in the grantees' respective institutions.

A *training on clinical research* was organized for 20 trainors in the Ermita Health Science Community while seven regional participants were supported in the *Third Asean Course on Tropical Epidemiology*.

Through the regional network and the EHSC, PCHRD maintains linkages with 66 institutions nationwide.

PCHRD SCHOLARS 1989-1990 (ongoing)		
A. DOCTORAL		
Name/Sending Institution	Field of Specialization	Training Institution
Dr. Romulo de Villa Dr. Nicanor Reyes Medical Foundation, Far Eastern Univ.	PhD Molecular Biology & Biotechnology	Molecular Biology & Biotechnology Program UP, College of Sciences
Dr. Gloria Bernas Faculty of Medicine and Surgery University of Sto. Tomas	PhD Biochemistry	Dept. of Biochemistry UP, College of Medicine
B. MASTERAL		
Mrs. Nenita Tinoko Environmental Mgt. Bureau	MS Environmental Engineering	UP College of Engineering
Mrs. Luz Acosta Research Institute for Tropical Medicine	MS PH Parasitology	UP College of Public Health
Ms. Rosario David Institute of Ophthalmology UP Manila	MS Public Health	UP College of Public Health
Dr. Esperanza Balcos Dr. Nicanor Reyes Medical Foundation, FEU	MS Pharmacology	Dept. of Pharmacology UP College of Medicine
Dr. Isidro Sia Dept. of Pharmacology UP College of Medicine	MS Pharmacology	Dept. of Pharmacology UP College of Medicine
Dr. Genesis Rivera Dr. Nicanor Reyes Medical Foundation, FEU	MS Pharmacology	Dept. of Pharmacology
Mrs. Adelaida Roman Environmental Mgt. Bureau	MS Environmental Engineering	UP College of Engineering
Dr. Mario Sanchez Cebu Institute of Medicine	MS Physiology	UP College of Medicine
Mrs. Carmen Tolabing DLSU, Emilio Aguinaldo College of Medicine	MS Public Health	UP College of Public Health
Dr. Josefino Alvero University of the East Ramon Magsaysay Memorial Medical Center	MS Public Health	UP College of Public Health

HUMAN RESOURCES AND

ONGOING PROJECTS FUNDED BY THE RHRDC REGIONAL RESEARCH FUNDS

Region	Institution	Project Title
6	West Visayas State University (WVSU)	A Comparison of the Effects of Tolnaftate & <i>Casialata</i> Ointment in Tinea Skin Infection A Study of the Water Supply Among Households in Selected Depressed Areas in the City of Iloilo Acceptability of Oresol as the Initial Treatment for Diarrheic Patients
	Iloilo Doctors' College of Medicine	Efficacy of Rice Water Powder Salt Solutions in the Treatment of Diarrhea
	Central Philippines University	A Study of Solid Waste Disposal Practices of Iloilo City Residents
7	Cebu Institute of Medicine	The efficacy of Tincture 10% in Comparison with Tolnaftate 10% in the Treatment of Tinea Corporis A Closer Look at Surgical Wound Infection in a Tertiary Hospital The Mutagenicity and Anti-mutagenicity of Coconut Oil
	Cebu (Velez) General Hospital	Umbilical Cord Care: A Study of Hydrogen Peroxide, 70% Alcohol and Betadine
	Regional Health Office No. 7	A Case Control Study on Factors Affecting Compliance Among MDT for Leprosy Patients
	Colegio de la Inmaculata Concepcion	A Tuberculosis Control Program for Children in Calero, Liloan Cebu
	Cebu Doctors' College of Medicine	The Incidence of Positive Bone Marrow AFB Stain and Culture for <i>M. tuberculosis</i> Among Patients Presenting with Hematologic Disorders
	Matias H. Aznar College of Medicine	Vibrio Parahemolyticus in Sea Foods in Metro Cebu
	Southern Islands Medical Center	Fine Needle Aspiration Biopsy: An Alternative in Diagnosing the Nature of Solid Soft Tissue Tumors
8	Regional Health Office No. 8	An Epidemiological Survey of the Non-Medical Use of Drugs Among High School Students in Tacloban City
	Divine Word University - Tacloban	Folk Medicine of Eastern Visayas (Emphasis on Medicinal Plants)
11	Davao Medical School Foundation	A Study on the Determinants of Low Percentage of Fully Immunized in Agdao A Study on the Determinants of Low Coverage Performance for Sputum Microscopy Few Family Planning Acceptors in Talomo "South" District Patterns of Drug Abuse Among Consumers in Davao City in the Management of Acute Respiratory Infections A Study on the Determinants of Low Treatment Compliance Related to Pulmonary Tuberculosis
	San Pedro Hospital	Guava Leaves Decoction in the Treatment Management of Partial Thickness Burns
	Davao Medical Center	Validity and Reliability of Water Analysis by Barangay Health Workers Using the PHC Bottle
		Clinical and Bacteriological Features of Malnourished Children with Severe Systemic Infections
	Department of Agriculture -XI	Antibiotic Residue Detection in Meat

Development of Regional Research Capabilities

Twenty-five (25) regional research projects (each costing less than P30,000) were supported. These projects are expected to provide beginning researchers the necessary hands-on experience in conceptualizing and implementing a research project.

The conduct of consultative workshop on health research and development for Northern Luzon did not only identify the priority research projects in the area, but more importantly, it provided an opportunity to upgrade regional planning capability. The organizational activities in Northern Luzon is part of the networking activities being undertaken in Regions VI, VII, VIII and XI.

INSTITUTION DEVELOPMENT



Through the regional network and the EHSC, PCHRD maintains inter-institutional, multi-disciplinary and collaborative activities.

HUMAN RESOURCES AND

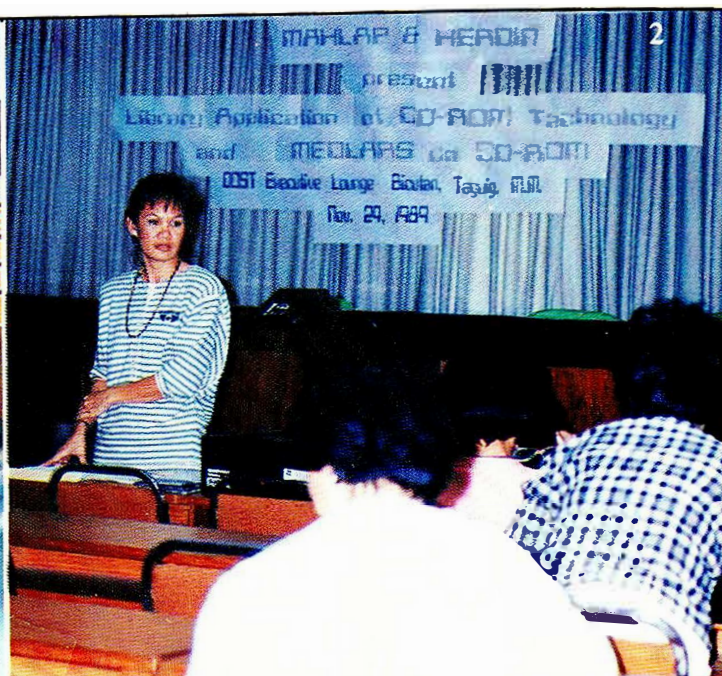
Ermita Health Science Community

PCHRD continued support to the development of the Ermita Health Science Community (EHSC) where the objective is maximizing present research capabilities. The EHSC is expected to develop high-level technologies and to serve as training center for other institutions, particularly those in the regions. Hence, EHSC activities are inter-institutional, multi-disciplinary, and collaborative. In 1989, four collaborative projects were implemented and two were completed.

In addition, the EHSC, using the scientific papers presented in a symposium on blindness, developed a program for the prevention of blindness. It called the attention of the Department of Health and other concerned sectors on possible strategies to improve the present program of the eye care delivery.

Title	Collaborating Agencies
(completed projects)	
Validation of FNRI-PPS Anthropometric Standard	Philippine Women's University Food & Nutrition Research Institute, DOST De La Salle University - Gen. Emilio Aguinaldo College of Medicine
Toxicity of Formaldehyde for Fish	Philippine Women's University Industrial Technology and Development Institute, DOST
(on-going projects)	
Cloning of Hepatitis B Virus (HBV) Deoxyribonucleic Acid (DNA) and Production of a Labelled HBV DNA Probe	Department of Biochemistry and Molecular Biology, UP College of Medicine Liver Study Group Department of Medicine UP-PGH
Preliminary Studies on the Immunological Status of Malnourished Filipino Schoolchildren	Department of Biochemistry and Molecular Biology, UP College of Medicine Department of Nutrition, College of Public Health, UP Manila
O Serotypes and R Plasmids of Nasocomial <i>Ps. aeruginosa</i> Isolates from the Intensive Care Unit of UP - Philippine General Hospital	De La Salle University UP - PGH
Isolation, Purification and Characterization of Retinal S-Antigen from Bovine Eyes: A Local Expensive	Institute of Ophthalmology, UP Manila Medical Center Manila Eye Referral Center Philippine Women's University De La Salle University-Gen. Emilio Aguinaldo College of Medicine

INSTITUTION DEVELOPMENT



- 1 PCHRD has played an important role in the information drive on generics.
- 2 Training on library application of CD-ROM technology and MEDLARS were provided to different regional librarians.
- 3 HERDIN conducts seminar -workshop on CDS/ISIS version 2.3 .
- 4 The introduction of new softwares shall revolutionize the health information technology in the country.

SCIENCE AND

Communication and Outreach Program

Six more publications were generated in 1989, from 12 to 18, which include four volumes of the health research state-of-the-art series, namely: diarrheal diseases, acute respiratory infections, schistosomiasis and leprosy. These publications reached some 7,000 members of the health research network.

Ten symposia (five of which were conducted in the regions) on health and related topics were held. These benefited about 1,046 researchers, medical practitioners, teachers, students, and staff of health related agencies:

Topics	Symposia	No. of participants
<i>(Venue: Manila)</i>		
Breastfeeding and Lactation Management		57
AIDS and Other Sexually Transmitted Diseases		150
National Drug Policy and the Generics Act of 1988		250
Tobacco Smoking		250
Community Participation in Health		409
<i>(Venue: Cebu)</i>		
Acute Respiratory Infection	50	
Maternal and Child Health	50	
Hepatitis B Virus: Part 2	50	
<i>(Venue: Iloilo)</i>		
Diarrhea and Water Sanitation	30	
Ethics in Research	20	

Information Technologies

The use of new information technologies such as the CD-ROM and electronic mail were demonstrated to 232 information officers, librarians, and researchers in Metro Manila; Baguio City; San Fernando, Pampanga; Cagayan de Oro City; and Davao City.

Trainings on information systems, including the use of CDS/ISIS version 2.3, were conducted for 31 representatives of DOST and DOH regional offices, and selected medical schools. Lectures on this software were also given to 19 information officers in Papua New Guinea.

Contents of four computerized databases were expanded with new entries from the three HERDIN nodes:

Database	No. of new entries
Bibliographic	1,730
Manpower	661
Project	280
Institution	133

Information Services

Information services from library and telex facilities were rendered to about 1,300 users.

Publication and Documentation	
Title	No. of copies
PCHRD 1988 Annual Report	1,000
Directory of Health Research Manpower	2,000
PCHRD Bulletin (with HERDIN newsletter insert)	2,000/issue
PCHRD Briefing Material (revised)	1,000
Inventory of Completed and Ongoing Health Researches (1988-1989)	1,000
Guidelines for Biomedical Research Involving Human Subjects (reprint)	500
EHSC Newscap	1,000/issue
Lagundi Monograph	500
Brochures on the Folk Use of Medicinal Plants (4 parts)	1,500/part
State of the Art:	
Leprosy	500
Acute Respiratory Infection	500
Diarrhea	500
Schistosomiasis	500
EHSC Brochure (revised)	1,000
Establishment of Quality Control Bioassay Procedures	500
"Herbal Medicine: A Viable Alternative for the Filipino People" (Dr. Cruz's professorial chair lecture)	500
"Bioassay of Medicinal Plant Products" (Dr. Quijano's professorial chair lecture)	500
Research Method on Health & Medicine: Volume 1 Planning Research (Dr. F.S. Sanchez, Jr., Dr. J. Baltazar, & S. Morelos)	1,500

TECHNOLOGY SERVICES



1 *The APINMAP - international technical cooperation group at work.*
 2 *POPLINE on CD-ROM.*
 3 *Marine life is endangered by the menacing red tide. Here, the WHO has extended support for toxicological studies.*

RESOURCE GENERATION

Linkages with local and international agencies resulted to PCHRD receiving the following support:

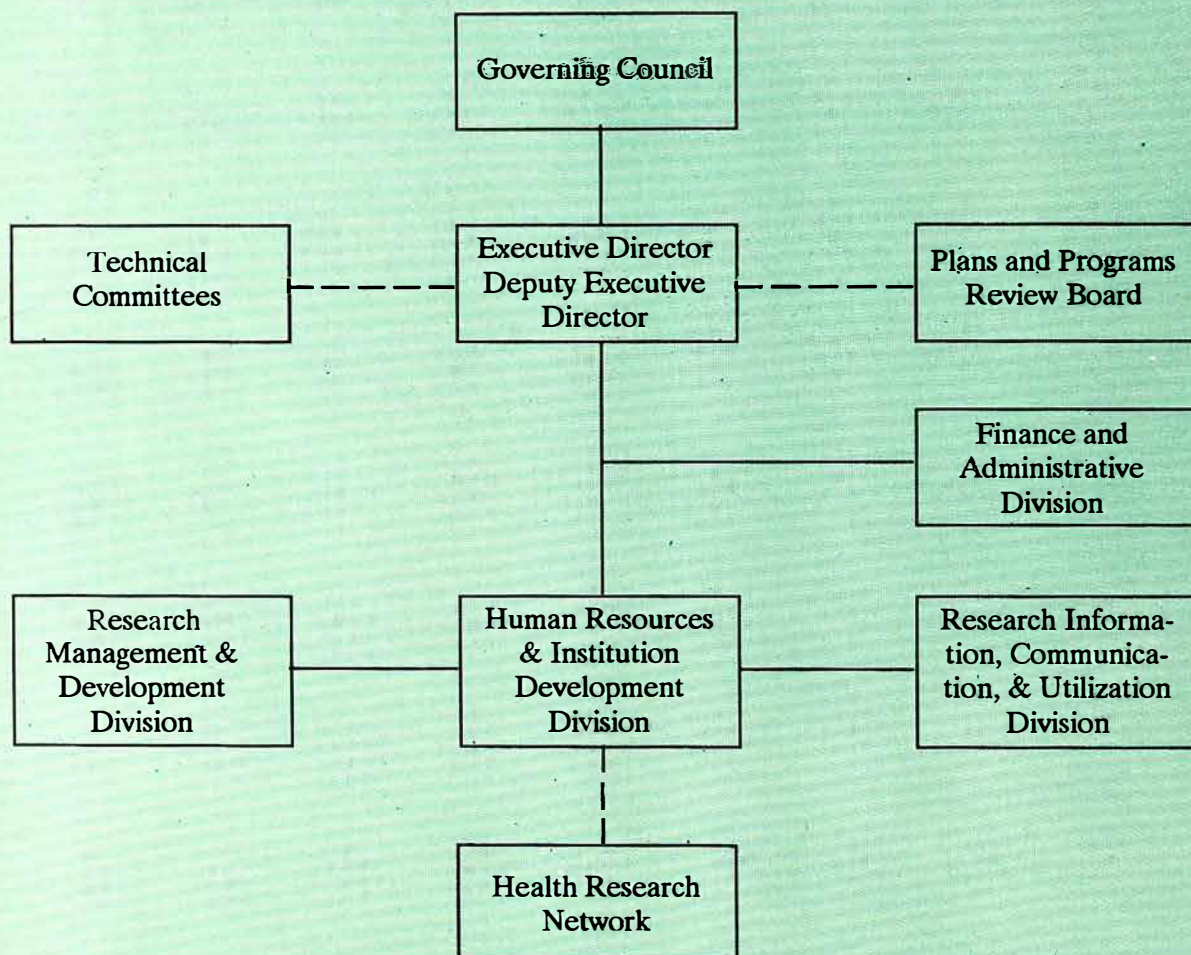
1. Project grant from WHO to support toxicological studies on shellfish involved in paralytic shellfish poisoning (P93,069)
2. Project grant from the Commission on Health Research for Development for a survey on health research resources (P105,000)
3. Manpower grants from the Drug Association of the Philippines (P30,000 for student herbal research), Eusebio Garcia Foundation (P18,000 for research chair) and Marsman Foundation (P394,547 for three masteral students in pharmacology and one professorial chair in pharmacology).
4. Access to POPLINE on CD-ROM from Johns Hopkins University and three Mallard electronic mailbox from UNESCO.
5. Approved in principle, HERDIN Phase II, expand its thrusts towards maximum utilization of information contained in databases and library network.

Twelve project proposals were also developed and submitted to external agencies for funding.

Project Proposals for External Funding		
Title	Proposed Funding Agency	Funding Requirement (million pesos)
Selected common children diseases and maternal nutrition	DOST-DFA	1.3
Standardization on pharmaceutical products	DOST	.5
Studies on the maintenance of clean environment to ensure production of safe and high quality prawns	DOST	.7
Studies on the prevention and control of paralytic shellfish poisoning in the Philippines	IDRC	4.4
Studies on the red tide phenomenon in the Manila Bay area caused by the dinoflagellate, <i>Pyrodinium bahamense</i>	WHO	.45
Cigarette smoking & health research and action program	Japan (MINIPRO)	10.9
Monitoring of drug prices	WHO	1.0
Human resources development in support of the Generics Act of 1988	WHO	1.0
Strengthening of research institutions through training in biochemistry	France	1.0
Manpower development in biotechnology	Japan (MINIPRO)	1.0
Health technology assessment	Swedish Agency for International Technical & Economic Cooperation	4.4
Regional and national APINMAP training	UNESCO	.6

AND LINKAGES

PCHRD ORGANIZATIONAL STRUCTURE



PCHRD PERSONNEL COMPLEMENT

	Regular	Contractual	Casual	Total
I. Technical	44	3	4	51
II. Support	30	2	—	32
Overall Total	74	5	4	83

HUMAN AND

**PCHRD 1989 ALLOCATION/EXPENDITURE
By Source of Funds**

Particulars	Allotment	Expenditures	Unexpended Balance
PCHRD Operations	P7,172,595.00	P6,603,076.39	P569,518.61
Grants-in-Aid	5,637,154.00	5,631,632.86	5,521.14
Foreign Assistance			
USAID	1,200,000.00	1,200,000.00	—
IDRC	2,034,236.91	1,419,239.37	614,997.54
WHO	93,069.00	80,688.74	12,380.26
Local Foundation			
Marsman Foundation, Inc.	394,547.00	40,000.00	354,547.00
Drug Association of the Phil.	30,000.00	—	30,000.00
Commission on Health Research (Survey on Health Research Resources)	105,000.00	81,829.93	23,170.07
TOTAL	P16,666,601.91	P15,056,467.29	P1,601,134.62

**1989 EXPENDITURE
By S & T Activity**

Research and Development	P 7,042,968.02
S & T Education & Training	2,538,963.51
S & T Services	3,801,910.54
General Administration	1,672,625.22
TOTAL	P15,056,467.29

FINANCIAL RESOURCES



1 Governing Council at work.
2 PCHRD key officials discuss the plans and programs of the Council.

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