

CHAIRMAN'S MESSAGE



The upbeat mood of 1994 brings in opportunities, as well as challenges to the Science and Technology (S&T) community.

With prosperity, we can expect a bigger and better share of the economic pie. We will have to bear in mind, however, that increased resources comes with a heightened expectation, thus, a bigger responsibility, for S & T to deliver more to sustain and enhance gains we had in 1994 towards the goals of Philippines 2000 and beyond.

We must, therefore, invest our resources in winning projects that consider very well our ever changing environment. We cannot help then but be more market-oriented in our way of doing S & T business.

Striking a good balance is a constant challenge. While we protect our national interest, for example, we should not lose sight of the fact that our transactions are getting more and more to be international in nature. While we pursue agri-industrialization, we should be aware that we want our greatest resource, our people, to have better quality of life in the same way that we want to preserve our environment for future generations.

I wish to assure our partners in S & T, specifically those in the health sector, that our goals of delivering superior technologies for national development is for man, and that man, as well, is the main source of development.

We have a big challenge before us. Let us turn this challenge into many opportunities for the Filipinos to grow towards shared prosperity.

A stylized, handwritten signature in dark ink.

WILLIAM G. PADOLINA, Ph.D.

Acting Secretary, DOST and
Chairman, PCHRD Governing Council

EXECUTIVE DIRECTOR'S REPORT



The year 1994 saw the world moving more and more into one global village. The advances of telecommunications gave way to a new and direct way of communicating and of doing business. Networking and strategic alliances became survival catchwords as the third wave society spelled out the new way of organizing and defining work.

Despite the constant global changes, the country improved its economic performance. It grappled with the changes in the geopolitical and socioeconomic spheres as more regional economic blocks consolidated their markets and strengths. Its ratification of the General Agreement on Tariffs and

Trade brought the Philippines into the fold of an international trade treaty which makes it imperative for the country to be competitive with the world's players from developed and developing countries to survive.

The challenge of globalization found its natural way into the Science and Technology System as people looked up to technology as the battleground where the Philippines can fight its way towards NIChood.

The Department of Science and Technology became a more prominent player in realizing the goals of Philippines 2000, the country's development blueprint. The apolitical S&T community wrestled with the realities of the marketplace to build the foundation of and to draw support for its short- and long-term plans.

The surprise change of leadership at midstream, when the then Secretary Ricardo T. Gloria was picked by President Ramos to head the Department of Education, Culture and Sports, did not prove to be a setback.

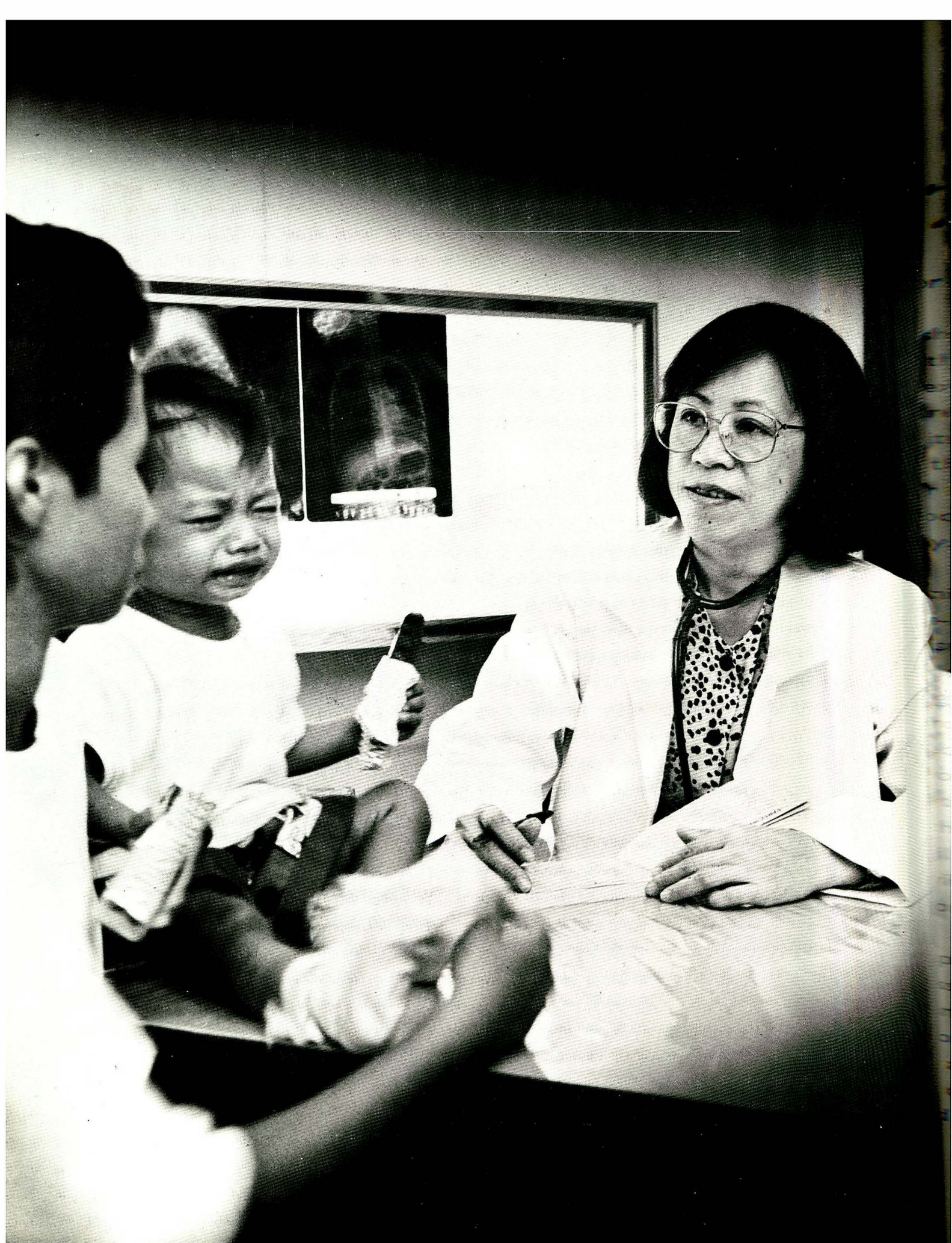
Acting Secretary William G. Padolina rose from his post as undersecretary and continued, with more vigor and focus, the Science and Technology Agenda for National Development (STAND) which the Department earlier charted in 1993 at the same time Philippines 2000 was launched.

To achieve better deployment of S&T resources to fewer but high-impact projects, the entire S&T bureaucracy went into soul-searching as it redefined its vision, mission, and goals. The new operational plan depicted logical clusters and groupings of projects and agencies.

The Philippine Council for Health Research and Development (PCHRD) responded to these changes in the environment with equanimity. Never had it been outwardlooking as it was this year.

We are thus pleased to share with you the fruits of the Council's endeavours for 1994 as it positioned itself to be responsive with the times.


PACITA L. ZARA, M.D.
Executive Director



Positioning Health R & D Towards STAND and Health for All

Looking for that winning project

The shift to a market orientation by the health R&D sector was achieved not at the expense of the social services sector where health traditionally belongs. The commitment to both concerns was formalized thru the Governing Council's decision for 60-40 allocation for technology- and socially-oriented projects, respectively.

A significant component of evaluating product-based research results now included ensuring first a viable market and a good chance of finding an adopter for the resulting products and services. Before approving any project, the Council has to reckon with questions like — "Who are your users?" • "Have you talked with them?" • "Are they committed to use the results?" • "Is there a company willing to commercialize the results or willing to share the risk by investing money in this research?"

In response to this new management process, the Council appointed and trained technology managers from its own ranks to undertake technology assessments and establish industry benchmarks of the predefined health products and services in STAND. A

good part of the year was allotted to conducting these technology assessment studies for medicinal plants, biomedical devices, vaccines, nutritional products, and pharmaceutical chemicals in consultation with industry and technical experts.

Winning some battles while fighting the war

During the year, eight Council-supported researches were completed. These included "Efficacy of Some Philippine Botanical Extracts Against Mosquitoes in the Philippines," "Cataract Surgical Set for Filipino Ophthalmologists," "Development of Hemoglobinometry Kit," "Double-Blind Placebo-Controlled Comparison of *Akapulko* Lotion and Crotamiton Lotion in the Treatment of Scabies (Phase I)," "Development of Antiserum against Saxitoxin & Tetrodotoxin," "Use of Body Fluids for the Diagnosis of Paralytic Shellfish Poisoning (Phase I-Urine)," "Application of N-15 Glycine to Study the Protein Requirement of Filipino Children Consuming Local Diet," and "Comparison of the Efficacy of Ogawa Culture Medium and Lowenstein-Jensen Medium for Culture of *Mycobacterium tuberculosis*."



Meanwhile, some of PCHRD's R&D investments paid off.

The soon-to-be released guidelines of the Bureau of Food and Drugs for registering medicinal plant products will place an express lane for would-be adopters of PCHRD - NIRPROMP technologies.

The best incentive of the express lane is that would-be adopters will be able to use the data on clinical trials of PCHRD's National Integrated Research Program on Medicinal Plants (NIRPROMP). The conduct of clinical trials usually accounts for the big delay in the registration process.

These procedural changes have significant positive impact on the Council's technology transfer process especially the transfer of health products which need BFAD approval.

On June 1, 1994 Secretaries Gloria and Flavio (DOH) jointly launched the *akapulko* lotion, an antifungal, developed by NIRPROMP. The Council is currently negotiating the transfer of the technology. Four companies formally signified their interest to commercialize *akapulko* lotion.

Likewise, negotiations on the commercialization of cataract surgical set are ongoing with a private company.

This particular negotiation also paved the way for the same firm's participation in a clinical trial research on bone implants. This was the first time a private company shared the risk by investing in the early phases of a research. The Council hopes that such participation becomes a regular part of the health research scenario, not only as a way to spread the risk in research, but, more importantly, as a way to hasten the technology transfer process — from research laboratories to production and marketing.

People are the heart of it all

It is still people who create, find, generate, and transform ideas into concrete products and services. People are the heart of research. To this end, the Council continued to foster human resource development in various ways.

The increase in this year's number of scholars — an additional 12 to the ongoing 22 scholars — was attributed to some policy changes. The Governing



Council approved the participation of part-time scholars, the increase in scholars' allowances, the provision of cash incentives for those who finish early or within schedule, the provision of re-entry research grants of ₱200,000.00, the widening of the field of disciplines where scholars can enroll in, and the provision of counterpart funds to the parallel development in medical schools on clinical epidemiology.

Earlier, it was very hard to entice medical practitioners to leave full-time their lucrative practices to be on scholarship.

As an entry point for beginning researchers, the evaluation of the Training Program on Biomedical Research Methodology showed that 10 projects were implemented by the trainees within schedule. The Council hopes that, thru this program, more people will go into health research.

The Council's other strategy of encouraging more people to go into research is its program to decentralize research capabilities in the regions via its Regional Health R&D Committees in Northern Luzon, Regions 6,7,8, and 11.

PCHRD's work along this line had been very rewarding, specifically in RHRDC 7 (Cebu City). We saw the group gelled towards self-determination. This development is of particular interest considering that the South looks up to Cebu, not only as a center of commerce, but as its guide in so far as developments are concerned.

We thus expect RHRDC 7, which has been registered as a foundation two years ago, to soon play a pivotal big brother role in the Visayas-Mindanao regions to accelerate the development of research capability.

We identified two strong points which attributed to RHRDC 7's growth. One, the presence of Fr. Theodore Murnane, SVD of the University of San Carlos. His tireless support and nurturing have been a source of inspiration for all to pursue the objectives of RHRDC. And two, the presence of a friendly competition among the private medical schools.

We hope that the other regions will find the best mix of factors that will enable them to strengthen themselves as a research group so they can eventually help other regions, too.

In Metro Manila, the counterpart of RHRDC is the Metro Manila Health Science Community (MMHSC). In 1994, the leadership of its Governing Board was assumed by Dr. Perla Santos-Ocampo, the new UP Manila Chancellor.

The Community also initiated moves to register MMHSC as a foundation with the Securities and Exchange Commission. This is expected to enhance its capability to generate resources for its collaborative R&D work.

Providing incentives is another strategy of the Council to encourage people to pursue a career in research. Rewarding outstanding researches and researchers is an example.

This year's PCHRD-Philippine HealthCare Association of the Philippines Student Research Awards in Herbal Medicine awardees were UST biochemistry students for the study on the antihemorrhagic property of *malunggay* leaves, and UP Manila physiology students for the study on the effects of extracts of *lagundi*, *bayabas*, and *sampaloc* on inflammatory processes.

Another venue for recognizing research works is our poster exhibit contest where outstanding research

presentations are rewarded with cash prizes. This year's winners in the professional and student categories, respectively were BIOTECH's "Production of Pro-vitamin A and Vitamin A for Nutrition and Health, and UST's physical therapy department entry, "Indigenous CPM-A Prototype."

Researchers within the network also have the advantage of being able to obtain information on opportunities for advance trainings in other countries. The Council regularly sends them or their institutions materials on this matter.

A good place to do research

The Council, realizing that researchers need the time, space, and tools necessary for their trade, continued to develop its identified seven centers of excellence. This year it granted institutional support to upgrade the research facilities for microbiology and parasitology of the Cebu Institute of Medicine.

In June of this year, we also saw the inauguration of a national research facility at the University of the Philippines Manila — the Institutes of Socio-Biomedical Research. As its name

implies, this facility, which is housed in the renovated NIST Building along Pedro Gil St. in Manila, will bring together biomedical and sociological researchers to conduct studies that respond to national health concerns.

Value-added information services

The Council was the first to take advantage of the Internet link which DOST supported. With this facility, HERDIN (Health Research and Development Information Network) users were able to access the world's health information resources, in addition to what were available locally.

PCHRD's dual participation in the Asian Pacific Information Network on Medicinal and Aromatic Plants (APINMAP) as the Philippine national node and the regional secretariat, enabled it to gain access to information and expertise within the region as well as to participate in APINMAP's initiatives like producing its information products and services in CD-ROMs.

In June, PCHRD organized with the Malaysian national node the 4th

APINMAP Management Board Meeting in Universiti Kebangsaan Malaysia.

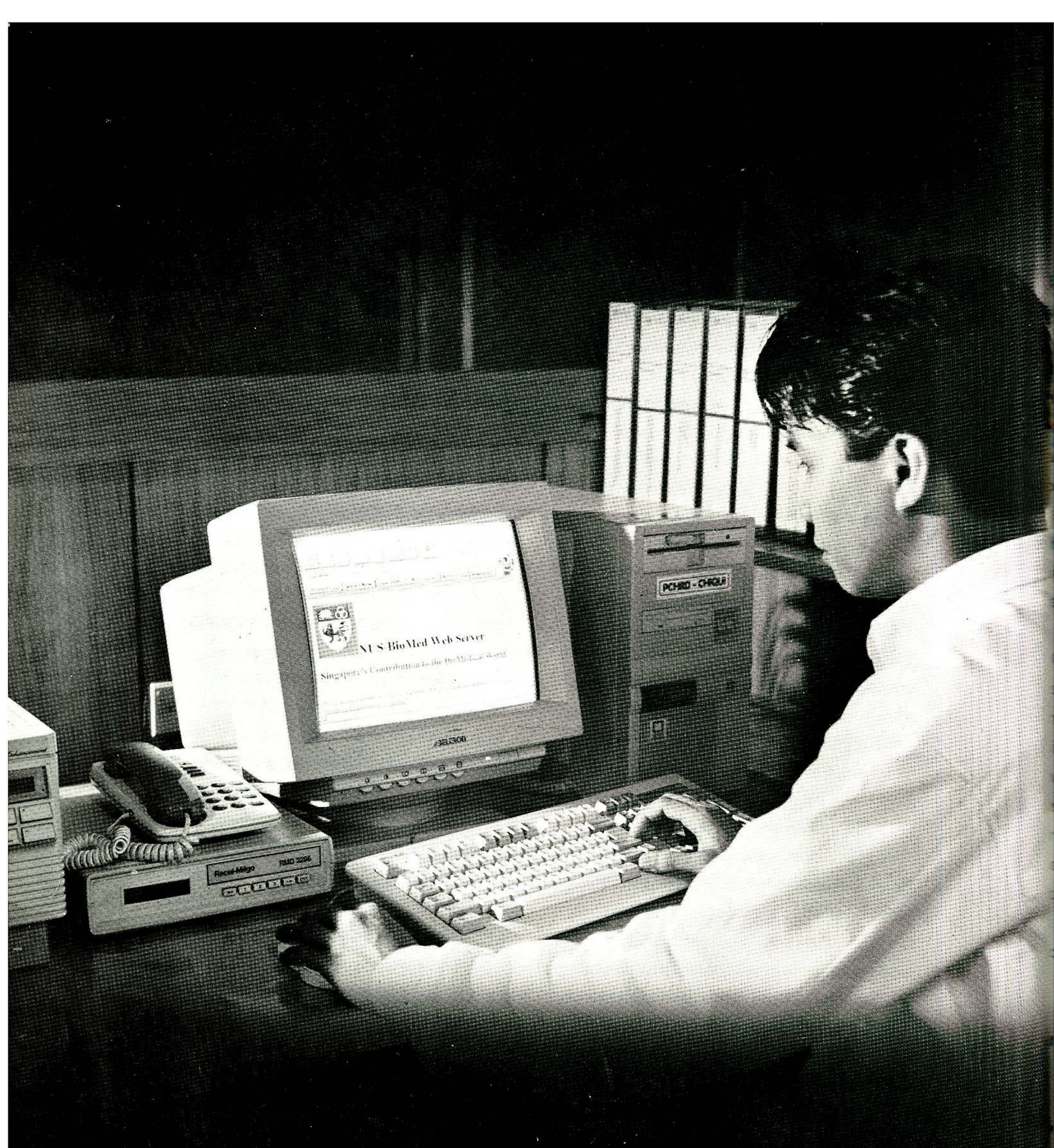
The Council's pioneering work in HERDIN paved the way for the development of inhouse trainers. This year, the Council conducted two trainings on CDS-ISIS software in cooperation with the DOST's Technology Training Center which is managed by the Technology Application and Promotion Institute.

Thru its HERDIN facility, PCHRD served a total of 5,757 searches requested by 2,512 clients.

Communicating what we are doing

The Council explored different media in its information campaign to promote S&T culture to a wide array of people.

The regular press conferences, press releases, radio and TV interviews gave the Council and its programs exposure to the general public. At the community level, PCHRD's participation in "Kapit-Bisig: DOST at Tagig" gave it the opportunity to demonstrate to the locals the proper use and preparation of



medicinal plants to cure common ailments.

On the other hand, the quarterly scientific symposia of the Metro Manila Health Science Community catered to the information requirements of the research community. Meanwhile, the investment fora and technology fairs targetted the would-be investors of PCHRD-supported product-based research results.

The Council, like the DOST System, has put more teeth to its proactive hazard watch activity. *Hazard-watch* monitors and identifies the most pressing and alerting health-related issues and subsequently feeds information to warn, advise, and teach the public to remedy if not prevent risk. This year, the Council responded to such issues as cholera, oil spill, red tide, and biotechnology, among other things.

Networking as a way of doing business

Networking has always been a way of life for the research community.

Today this network has expanded to include non-traditional partners like industry and business.

In 1994, the Council initiated serious dialogues with the private sector to get a good feel of what the market for health care products and services need from the research community. During its 12th year anniversary celebration in March, it adopted the theme, "Partnership in R&D with the private sector."

This partnership was also seen in PCHRD-UNILAB's sharing of information. PCHRD's research information were regularly featured in the *Medical Courier*, a UNILAB publication distributed to some 15,000 medical practitioners nationwide.

Partnerships with other countries thru bilateral agreements were also made. These included the RP-India Joint Working Group on pharmaceuticals and the RP-China exchange on medicinal plants.

PCHRD Allotment	P19,519,396.00
Trust Fund	4,658,883.55
Direct External Grant	226,688.85
Indirect External Grant	1,599,850.00
Total Receipts	P25,997,768.40

Sources of Funds, 1994

Network Coordination	39 %
S & T Services	7 %
General Administration	17 %
Research and Development	21 %
Education and Training	16 %

***Allocation of PCHRD allotment by
S & T activity, 1994***

Technical	41
Non-Technical	32
Total	73

***Number of PCHRD
personnel, 1994***

Positioning PCHRD to Perform its Mandate

People manning PCHRD business

At the helm, changes in the composition of the Governing Council were seen. Acting Secretary Padolina assumed the chairmanship from the then Secretary Gloria on July 7, 1994. Chancellor Perla Santos-Ocampo became an ex-officio member representing UP Manila while Dr. Ernesto O. Domingo was sworn in as the new representative of the private practitioners group.

A new member, Dr. Josefina Poblete, dean of the College of Medicine of the Cebu Institute of Medicine, was inducted into office to represent the regions. The membership of the other two private sector representatives, Dr. Abraham F. Pascual and Dr. Fernando S. Sanchez, Jr., was also renewed.

The other ex-officio members included DOH Undersecretary Jaime Galvez-Tan, National Nutrition Council Executive Director Elsa Bayani, and PCHRD Executive Director Pacita L. Zara.

The Secretariat had its own visioning session in May where the staff defined where they want to go, as an organization, 15-20 years hence. The session proved to be a revelation by itself. It proved that there are so much talents from within which can be

harnessed to enable PCHRD to meet the challenges posed by a constantly changing environment to perform its mandate.

Financial resources: from where, for what

For calendar year 1994, the Council had a total allotment of ₱19.5M. Additional funds were generated from other sources. External sources of funds included the Department of Science and Technology; Technology Application and Promotion Institute; Science and Technology Information Institute, Fernando H. Lopez Biomedical Research Center; Mary Blythe Petersen Marsman Foundation; Eugenio Lopez Foundation; Medical Test Systems, Inc.; Resins, Inc; Herba Pharm Corporation; Pilipinas Shell Foundation, Inc; Philippine American Life Assurance Corporation; Henares Foundation; Department of Health; International Development Research Centre of Canada; the Australian International Development Assistance Bureau; the government of Belgium, and the French government.

The ₱19.5M PCHRD allotment was distributed to the following S&T Activities: Research and Development, General Administration, Network Coordination, S&T Services, and Education and Training.

R & D PROJECTS FOR 1994

I. Pharmaceuticals R & D

Studies on seed gum from *Leucaena leucocephala* (**ipil-ipil**) for pharmaceutical industry
Phase I. Bulk extraction of seed gum from *Leucaena leucocephala*
Irene M. Villasenor, PhD
Institute of Chemistry, UP Diliman
NEW

Phase II. Seed gum from *Leucaena leucocephala* (**ipil-ipil**) as an excipient in pharmaceutical liquid dosage form
Prof. Leticia Barbara B. Gutierrez and Fernando Marquez
College of Pharmacy, UP Manila
NEW

Chemistry of selected plants with antitubercular potentials
Dr. Alicia M. Aguinaldo
Research Center for the Natural Sciences, UST
ONGOING

Double blind placebo-controlled comparison of *akapulko* lotion and crotamiton lotion in the treatment of scabies (Phase I clinical trial)
Drs. Nilo Rivera, Elena S.J. Tolentino, and Lilian Villafuerte
Jose Reyes Memorial Medical Center (JRMWC)
COMPLETED

Pharmacognostical studies of selected Philippine medicinal plants (*kalabasa* seeds; cinchona bark; *makabuhay* stem; *bulak-damo* leaves; *sampasampalukan* leaves, stems, and roots; radish roots; *gumamela* red flower; *takip kuhol* leaf; avocado leaves; *alagao* leaves; *mangga* leaves; *kulantro* seeds; *banaba* leaves)
Dr. Cecilia Zamora
Institute of Biology, UP Diliman
NEW

Pharmacognostical studies of selected Philippine medicinal plants (*lagundi* leaves; *sambong* leaves; *akapulko* leaves; *tsaang gubat* leaves; *tanglad* leaves; guava leaves; *ampalaya* leaves; *sulasi* leaves; *yerba buena* leaves; *damong maria* leaves; *ulasimang bato* leaves; mangosteen mesocarp; *niyog-niyogan* seeds; *bawang* bulb; *ipil-ipil* seeds)
Dr. Cecilia Zamora
Institute of Biology, UP Diliman
COMPLETED

Establishment of quality control bioassay standard procedures for medicinal plant products
Dr. Romeo F. Quijano
College of Medicine, UP Manila
ONGOING

Pharmacologic and toxicologic studies of Philippine medicinal plants
Dr. Horacio R. Estrada
College of Medicine, UP Manila
ONGOING

Mutagenicity, clastogenicity, and antimutagenicity potential of drug preparations from Philippine medicinal plants
Dr. Clara Y. Lim Sylianco
Institute of Chemistry, UP Diliman
ONGOING

Dosage forms from medicinal plants constituents
Dr. Natividad De Castro and Prof. Leticia Barbara B. Gutierrez
College of Pharmacy, UP Manila
ONGOING

Clinical screening and validation studies of medicinal plant products used in traditional folk medicine in the Philippines
Dr. Nelia P. Cortes-Maramba
College of Medicine, UP Manila
ONGOING

II. Biologicals

Development of a simple immunoassay for the clinical detection of serum transferrin
Milagros B. Leaño
College of Medicine, UP Manila
NEW

Production of serum and alternative culture media using coconut water and egg yolk for mammalian cell cultivation
Dr. Pham B. Chay
BIOTECH, UP Los Baños
ONGOING

R & D PROJECTS FOR 1994

Development of an immunodiagnostic test for the detection of antibodies against hepatitis B virus core antigen
Dr. Bernadette Libranda-Ramirez and Fe Amor Vinculado
Research Institute for Tropical Medicine
 NEW

Development of diagnostic kit to detect pathogenic and non-pathogenic strains of *Entamoeba histolytica*
Drs. Filipinas Natividad and Ronald R. Matias
Institute of Biology, UP Diliman
 ONGOING

Preparation of ophthalmic grade hyaluronic acid from human umbilical cord
Drs. Ramon M. Miranda and Benigno D. Pecson
Institute of Chemistry, UP Diliman
 ONGOING

III. Biomedical Devices

Cataract surgical set for Filipino ophthalmologists
Dr. Romeo V. Fajardo
UP-PGH
 COMPLETED

Development of cerebrospinal fluid (CSF) shunt Phase II
Dr. Renato Q. Sibayan
Faculty of Medicine and Surgery, UST
 ONGOING

Development of a hemoglobinometry kit
Dr. Fortunato Sevilla
Research Center for the Natural Sciences, University of Santo Tomas
 COMPLETED

Development of a mechanically-driven pressure and volume regulated ambubag Phases I & II
Engr. Alexander P. Paran (Phase I)
Dr. Camilo C. Roa (Phase II)
College of Engineering, UP Diliman
UP-PGH
 ONGOING

IV. Nutritional Products

Clinical trials of FVRice-iron fortified
Ma. Regina A. Pedro
Food and Nutrition Research Institute
 NEW

Technical feasibility study of iron-fortified (premix) rice production
Alejandro M. Martin, Jr.
Food and Nutrition Research Institute
 NEW

Vitamin A fortification of coconut cooking oil and other oil-based processed foods
Dr. Lydia M. Marero
Food and Nutrition Research Institute
 NEW

Production of provitamin A and vitamin A for nutrition and health
Dr. Pham B. Chay
BIO TECH, UP Los Baños
 ONGOING

V. Traditional Areas of Concern

a. communicable diseases

A validation of WHO case management protocol for pediatric patients with bloody diarrhea (dysentery)
Dr. Lulu Bravo
UP-PGH
 ONGOING

Comparison of the efficacy of Ogawa and Lowenstein-Jensen culture media for the isolation of *Mycobacterium tuberculosis*
Dr. Myrna Mendoza
College of Medicine, UP Manila
 COMPLETED

Clinical, radiologic, microbiologic, and pathologic features of drug susceptible and resistant *M. tuberculosis* and MOTT infection in patients with HIV infection
Dr. Jaime C. Montoya
Research Institute for Tropical Medicine
 ONGOING

R & D PROJECTS FOR 1994

Community-based surveillance
for drug resistance of
Mycobacterium tuberculosis in
selected areas

*Drs. Tessa Tan-Torres and Myrna T.
Mendoza*

College of Medicine, UP Manila
ONGOING

Prevalence of antibodies to HCV
among risk groups in the
Philippines: Development of
alternative diagnostic procedure
for HCVAb

*Drs. Ernesto O. Domingo and
Mary Ann Lansang*
*Liver Study Group and Research
Institute for Tropical Medicine*
ONGOING

Hospital-based surveillance for
multidrug resistant typhoid fever
(MDR-TF) in Metro Manila

*Drs. Mediadora C. Sanial and
Mark White*
*Philippine Society of Microbiology
and Infectious Diseases*
NEW

b. degenerative and metabolic disorders

Situational analysis for
neurological diseases R & D
program

Dr. Joven R. Cuanang
UERMMMC
NEW

Situational analysis for
cardiovascular diseases R & D
program

Dr. Fernando Sanchez
UERMMMC
NEW

Situational analysis for diabetes
R & D program

Dr. Ricardo E. Fernando
St. Luke's Medical Center
NEW

Situational analysis for eye
diseases R & D program

Dr. Salvador R. Salceda
Institute of Ophthalmology,
UP-PGH
NEW

c. environmental / occupational health

Somatic mutation in peripheral
blood lymphocytes among
Metro Manila residents:
Indicator of exposure to
environmental pollution

Ma. Teresa Yulo-Nazarea
*Philippine Nuclear Research
Institute*
NEW

Survey of work hazards and
health status of laboratory
workers in the Ermita Health
Science Community

Dr. Benjamin C. Vitasa
College of Public Health
UP Manila
ONGOING

Development of antiserum
against saxitoxin and
tetrodotoxin

*Ma. Andrea S. Mendigo and Dr.
Lourdes J. Cruz*
Marine Science Institute
UP Diliman
COMPLETED

Use of body fluids for the
diagnosis of Paralytic Shellfish
Poisoning, Phase I: Urine
Dr. Niño Ismael Pastor (DOH)
*and Ma. Andrea Mendigo (Marine
Science Institute, UP Diliman)*
COMPLETED

REGIONAL RESEARCH PROJECTS

Region VI

Cyanide content of selected plants in Iloilo
Gerard Penecilla
Western Visayas State University

The bioactivity of aqueous extracts from soft corals
Dr. Marie Frances J. Nievaes
UP Visayas

Comparative study using latin square design on the safety and efficacy of topical *Cymbopogon citratus*, *Pepperomia pellucida*, their combination, placebo, and peroxicam on muscle joint pains
Prof. Mansueta Yaplito
Western Visayas State University

Region VII

The cost benefits of breastfeeding
Dr. Thelma Fernandez
Cebu Institute of Medicine

KAP of diarrhea among mothers in Banilad, Mandawe City
Dr. Mirasol Cabije
UV Gullas College of Medicine

Malaria outbreak in nonendemic Cebu: Its epidemiology and transmission
Dr. Angelita Salarda
DOH-RHO # 7

A case control study of diarrheal diseases among children below one year old in Banilad, Mandawe City
Dr. Teresita Quisumbing
UV Gullas College of Medicine

KABP survey in ARI in children under five in rural setting
Dr. Susana Madarieta
DOH-RHO # 7

Short course, low-dose intradermal hepatitis B vaccination using recombinant vaccine
Dr. Cecile A. Clavano de Asis
Cebu Doctors Medical College

Acid-fast microscopy in respiratory tuberculosis
Dr. Peter Gotiong
SWU-MHAM College of Medicine

Region XI

Determinants of work performance of primary health care workers
Dr. Milagros Viacrusis
DOH-RHO # 11

Twenty-four hour urine calcium / creatinine ratio and microalbuminuria as predictors for pre-eclampsia
Dr. Honey Sarita Abarquez
Davao Medical Center

A study of charcoal-sand dual media filter efficiency in manganese and iron removal in Koronadal ground waters
Dr. Grace Vicente
Notre Dame of Marbel University

Hepa B and hepa C among health care workers and patients in Davao Medical Center
Dr. Nicasio Alejandro Arjona, Jr.
Davao Medical Center

Doctoral Programs

Gloria Bernas
PhD Biochemistry
College of Medicine, UP Manila

Eleanor Padla
PhD Microbiology and Parasitology
University of Santo Tomas

Nymia Simbulan
PhD Health Education
College of Public Health
UP Manila

Dr. Romulo de Villa
PhD Molecular Biology and Biotechnology
UP Diliman

Josefina Tuazon
PhD Public Health
College of Public Health
UP Manila

Milagros Querubin
PhD Nutrition
College of Home Economics
UP Diliman

Bernadette Simbulan
PhD Medical Microbiology
College of Public Health
UP Manila

Masteral Programs

Dr. Nicanor Biso
MS Public Health
College of Public Health
UP Manila

Dr. Danilo Menorca
MS Microbiology
University of Santo Tomas

Dr. Rita Alvero
MS Public Health major in Epidemiology
College of Public Health
UP Manila

Dr. Rosemarie Arciaga-Santana
MS Public Health major in Epidemiology
College of Public Health
UP Manila

Dr. Lagrimas Moderes
MS Public Health major in Epidemiology
College of Public Health
UP Manila

Girly De Los Reyes
MS Pharmaceutical Chemistry
College of Pharmacy, UP Manila

Dr. Christine Tinio
MS Public Health
College of Public Health
UP Manila

Dr. Bernadette Tumanan
MS Clinical Epidemiology major in Clinical Epidemiology
Clinical Epidemiology Unit
College of Medicine
UP Manila (CEU, UP Manila)

Dr. Joseph Molina
MS Public Health major in Epidemiology
College of Public Health
UP Manila

Dr. Erle Castillo
MS Epidemiology major in Clinical Epidemiology
CEU, UP Manila

Dr. Sotera Catapang
MS Public Health major in Biostatistics
College of Public Health
UP Manila

Dr. Grace Villanueva
MS Epidemiology major in Clinical Epidemiology
CEU, UP Manila

Dr. Ronaldo Santos
MS Epidemiology major in Clinical Epidemiology
CEU, UP Manila

Dr. Petrina Zotomayor
MS Epidemiology major in Clinical Epidemiology
CEU, UP Manila

Dr. Oscar Cabahug
MS Epidemiology major in Clinical Epidemiology
CEU, UP Manila

Lyndon Lacaya
MS Statistics
UP Statistical Center

Dr. Edward Wang
MS Epidemiology major in Clinical Epidemiology
CEU, UP Manila

PCHRD SCHOLARS

Dr. Lyde Alday Magpantay
MS Epidemiology major in
Clinical Epidemiology
CEU, UP Manila

Dr. Raul Coching
MS Epidemiology major in Clinical
Epidemiology
CEU, UP Manila

Dr. Herman Tolentino
MS Epidemiology major in Clinical
Epidemiology
CEU, UP Manila

Dr. Isidro Sia
MS Pharmacology
College of Medicine, UP Manila

Dr. Esperanza Balcos
MS Pharmacology
UP College Medicine

Dr. Bianca Garcia
MS Physiology
College of Medicine, UP Manila

Dr. Rosa Marie Flores
MS Public Health major in
Epidemiology
College of Public Health
UP Manila

Nonita Cerillo
MA Statistics
UP Statistical Center

Dr. Eleanor Galvez
MS Public Health major in
Epidemiology
College of Public Health
UP Manila

Jennifer Sampang
MS Parasitology
College of Public Health
UP Manila

Dr. Revelyn Rayray
MS Public Health major in
Epidemiology
College of Public Health
UP Manila

Dr. Roberto Ruiz
MS Epidemiology major in
Clinical Epidemiology
CEU, UP Manila

Dr. Lorna Aba
MS Epidemiology major in
Clinical Epidemiology
CEU, UP Manila

Dr. Marissa Orillaza
MS Epidemiology major in
Clinical Epidemiology
CEU, UP Manila

Thesis/Dissertation Assistance Grantees

Patrick Lim
MS Chemistry
University of San Carlos
Thesis Title Persistence and
degradation of endosulfan on
cabbage and eggplant

Mari-Rose P. Dimataga
MS Chemistry
University of San Carlos
Thesis Title The efficiency of
chlorination process using conven-
tional and solar power sources

Yolanda Chua
MS Pharmacy
University of San Carlos
Thesis Title The antiseptic activity
of *santan* (*Ixora coccinea* L.
Family Rubiaceae) roots

Amy Calumpang
MS Pharmacy
University of San Carlos

Thesis Title In vitro determina-
tion of the anticoagulant
property of *Auricularia auricula*
(Hook.) Underwood

Sandra Cases-Sy
MS Pharmacy
University of Santo Tomas
Thesis Title The phytochemi-
cal and microbiological proper-
ties of *Cassia sophera*
Leguminosae

Erlinda Tan Nuguid
MS Pharmacy
University of Santo Tomas
Thesis Title Zinc, copper, and
cadmium levels of Filipinos with
coronary heart disease

Concepcion Salvaña
MS Chemistry
MSU-Iligan Institute of
Technology
Thesis Title Isolation and
partial characterization of the
most active bioactive principle
in *Nephrolepis cordifolia*

Elena Gianan
MS Nutrition
Catanduanes State College
Thesis Title Prevalence of
iodine deficiency disorder
(IDD) among schoolchildren
in public elementary schools in
Virac, Catanduanes

Rafaelita Ong
Doctor of Public Health major
in Health Education
College of Public Health
UP Manila
Dissertation Title Health
education interventions to
minimize defaulting of leprosy
patients on multidrug therapy



The PCHRD Governing Council, from left: Mrs. Elsa Bayani, Dr. Abraham Pascual, Dr. Pacita Zara, Dr. William Padolina, Dr. Jaime Galvez-Tan, Dr. Ernesto Domingo, Dr. Perla Santos-Ocampo, Dr. Josefina Poblete, and Dr. Fernando Sanchez, Jr.