

m

1999 Annual Report

Philippine Council for Health Research and Development Department of Science and Technology





meeting the challenges of health in the 21st century

1999 Annual Report

Philippine Council for Health Research and Development Department of Science and Technology



Messages

5
7 Introduction
Highlights of Accomplishments
3 Implementation of High Priority Flagship Programs Comprehensive Program to Enhance Technology Enterprises (COMPETE) S&T Intervention for the Poor, Vulnerable, and Disabled Comprehensive S&T Program for Mindanao
 20 Strengthening and Sharpening Focus of Continuing Programs Health Policy R&D Technology Transfer and Commercialization Promotion and Application of Information and Communications
30 Improving S&T Governance, Management, and Linkages
33 Financial and Human Resources Management
34 Challenges and Directions
36 Directory of PCHRD Officials
38 Organizational Chart



Message

I am pleased to present the milestones in health science and technology that the Philippine Council for Health Research and Development (PCHRD) charted in 1999 in committed service to the Filipino people.

The transition from an agriculture-based economy to a capital-intensive manufacturing economy to a knowledgebased economy calls for leveraging on the generation and exploitation of knowledge to create wealth. I am proud to say that PCHRD has positively responded to this call. The Council has developed and transferred to the production sector knowledge and innovations that will promote the people's health and well-being and at the same time draw profit for the health industry.

PCHRD's information and communication technology initiatives particularly in the country's far-flung villages are noteworthy. These will link village people to information sources and empower them to participate in the knowledge society's bid for progress and prosperity.

With PCHRD sustaining its efforts at creating and applying knowledge for health development, health for all Filipinos will no longer be a tantalizing promise but a reality felt and enjoyed by all.



Chairman PCHRD Governing Council, and Secretary Department of Science and Technology



Message

Thinking in the future tense. The year that was was spent positioning health science and technology (S&T) to meet the health challenges the 21st century is expected to usher in

In early 1999, we successfully conducted the 5th National Health S&T Congress. With inputs from this national forum and with the "voices from the grassroots" as our guide, we carved a National Health S&T Plan that is more responsive and relevant to the needs of the people. In the next four years, we can expect more focused, need-driven programs on research and development, education and training, and research information promotion and utilization. Consistent with the Department of Science and Technology's flagship programs, we will pursue our programs guided by the vision of a competent and competitive health science community imbued with a social conscience.

To enable us to sustain the creation of health knowledge and innovations in the coming years, we set into motion the twinning arrangement that will fasttrack the development of research expertise in the regions.

We shared the gains we made in health research through the transfer of the *lagundi* pediatric syrup production technology to two Filipino-owned pharmaceutical companies. The commercial availability of an affordable alternative cough remedy will expand the choices of our consumers, particularly the disadvantaged groups in our society.

Details of these and more are presented in the next pages As we leave the 20th century and enter the next, we pause for a while to relish the harvest of health strides we have accomplished for the Filipinos in the last 18 years. We present these achievements in this report to remind our partners in health of their invaluable contribution to our task of fostering health for development.

javita & for

Pacita L. Zara, M.D. Executive Director



PCHRD: Making a Difference in the Health and Well-being of Filipinos

Who We Are

The Philippine Council for Health Research and Development (PCHRD) is one of the five sectoral councils of the Department of Science and Technology. It is a forward-looking, partnership-based national body responsible for coordinating and monitoring research activities in the country.

PCHRD was created on March 17, 1982 through Executive Order No. 784. In 1987, Executive Order No. 128 reaffirmed its existence and relevance. This directive reorganized the National Science and Technology Authority into what is now the Department of Science and Technology.

Our Vision

A competent and competitive health research organization with a social conscience

Our Mission

To provide and strengthen the scientific and technological base for health care delivery in the country

What We Do

As the focal point for health research and development (R&D) in the country,

- we provide leadership and direction in health and related R&D activities;
- we rationalize investment in science and technology (S&T) through a system of review of ongoing and pipeline projects in the government sector, and by influencing the private sector to support and implement projects that are in consonance with the Health S&T Plan;
- we develop and strengthen human and infrastructure resources of the health research network;
- we implement a research utilization program to ensure that research results are properly disseminated among and utilized by their intended users;
- we facilitate the identification and packaging of health technologies for adoption and commercialization by both government and private sectors; and
- we generate additional resources for health R&D by pursuing active collaboration with local and international funding agencies.





Charting changes, meeting the challenges of health in the 21st century

The temper of the times has changed the terrain of science and technology (S&T). At the global scene, the pressure for high value-added and competitive products for the global market has seeped into and influenced research and development (R&D) as well as the production and marketing of products and services. At the national front, the vision set forth by the Estrada administration is one of economic growth pursued in cadence with social equity.

These directions call for revitalized efforts that will, using S&T, strengthen the competitiveness of Philippine industries as well as help improve the social well-being of the people. The Medium-term Plan of the Department of Science and Technology (DOST) (1999-2004) sculpted by the new DOST leadership supplies the framework for these efforts.

The Medium-term Plan of DOST will implement three strategies: 1) implementing high priority flagship programs, 2) strengthening and sharpening focus of continuing programs, and 3) improving S&T governance. These strategies will be operationalized guided by the principles of competence, competitiveness, and conscience. With the Medium-term Plan of DOST as its touchstone, the Philippine Council for Health Research and Development (PCHRD) re-aligned its programs and projects in 1999.

Poised at the threshold of the 21st century, PCHRD attempted to translate the Medium-term Plan into viable knowledge, innovations, products, services, and strategies that will meet the challenges of health in a technologically driven era. The following pages tell the modest results of our efforts.



Highlights of Accomplishments

High Priority Flagship Programs

To catalyze health research and development (R&D) in the private sector as well as enhance private sector participation in health science and technology (S&T) activities, we established the twinning arrangement. This mechanism matches a center of excellence (the older twin) with a region-based satellite institution (younger twin) so that the former may help the latter develop its research expertise. This is expected to contribute to DOST's Comprehensive Program to Enhance Technology Enterprises (COMPETE).

We funded 32 R&D projects to generate knowledge and innovations that will address the needs of the poor, vulnerable, and disabled. These projects focused on drug development, communicable diseases, degenerative and metabolic diseases, environmental and occupational health, policy studies, vaccines and biologicals as well as nutrition.

Following the track of the Comprehensive S&T Program for Mindanao, we supported the graduate studies of three scholars from Region 10. We set in place a mechanism through which member-institutions of the Health Research and Development Committee in Region 11 may benefit from the synergy from resources complementation.

We laid the foundation for the establishment of Internetlinked multipurpose community telecenters (MCTs) in four *barangays* (villages) in Region 12 and the Caraga Region. The MCTs will link the pilot communities to information resources and development stakeholders in health, education, agriculture, fisheries, and rural enterprise development. The project is envisioned to empower the community residents, mobilize them into positive action, and help them become self-reliant.

Strengthening and Sharpening Focus of Continuing Programs

We commissioned a policy study for the Department of Health's National Drug Policy Program. Based on the study findings, an action plan that will bring about the reforms required to resurrect the Filipino drug industry was outlined.

Our initiatives helped give birth to a culturally appropriate and gendersensitive code of ethics for reproductive health research. The code of ethics will safeguard the well-being and dignity of subjects and researchers in reproductive health research.

The clinical practice guidelines we developed define when and under what conditions referral for pre-operative cardiopulmonary evaluation is called for. The use of the guidelines will not only obviate the cost of unnecessary referrals; it will also translate to quality care.

In 1999, we transferred the technology for the production of *lagundi* (*Vitex negundo* L.) pediatric cough syrup to Pascual Laboratories, Inc. and Gruppo Medica, Inc., both Filipino-owned drug companies. The local production of this herbal cough remedy for children will make available a safe, effective, and affordable alternative to commercial pediatric antitussives.

Recognizing the vital role of information in health S&T, we continued to build and promote the use of our information resources. We tapped the power of state-of-the-art information and communications technology to do this. We strengthened the e-Health information village by engaging information generators to develop its information content. We repackaged the database of the *Philippine Journal of Surgical Specialties* in CD-ROM and Web versions to expand users' access to surgery-related information. We have also made the tuberculosis database accessible via the Internet.

For their creativity and innovative repackaging of the HERDIN (Health Research and Development Information Network) databases in CD-ROM, the PCHRD CD-ROM Development Team was awarded a plaque and PhP50,000 by Sen. Ramon B. Magsaysay, Jr., chair of the Senate Committee on Science and Technology.

We continued to build the national capacity for health innovation. In 1999, we facilitated the release of PhP7.4 million DOST grant to the University of the Philippines Manila for the purchase of a universal testing machine and the setting up of a biomechanical laboratory. This facility will help accelerate research capability development in biomedical devices R&D.

In 1999, we supported 75 scholars in the doctoral and masters programs, 38 thesis and dissertation grantees, and 8 research fellows. To hone the research capability of beginning researcher in the regions, we funded 23 research projects in Regions 6, 7, 8, and 11. We conducted 14 training courses participated in by 400 health professionals and information workers in the health research network.

We established the Health Research and Development Committee in Region 1 (RHRDC-1) to develop the research capability in Ilocos Norte, Ilocos Sur, La Union, and Pangasinan. RHRDC-1 is composed of representatives from the health delivery sector as well as government and academic institutions involved in health and related activities. It is tasked to put in place mechanisms to strengthen research capability and coordinate research and related activitues in the region.

In 1999, we provided research incentives to researchers at the student and professional levels. These were given through the PCHRD-Gruppo Medica Outstanding Research in Herbal Medicine Award, the PCHRD-Pharmaceutical HealthCare Association of the Philippines Student Research Award, and the Scientific Poster Exhibit Award. We launched the Regional Researcher of the Year Award to promote and sustain research interest and productivity in the regions.

We produced 37 print materials intended for policymakers, program planners and implementers, entrepreneurs, health practitioners, researchers, students, and teachers. To expand our audience coverage, we repackaged these publications into electronic format. Internet users were thus able to read our print materials in the Web.

ars

We promoted the technologies developed by our researchers through the 14 technology fairs and exhibits we participated in in the country's different regions. We stimulated thought and discussions on different health topics through the eight symposia we conducted in 1999.

Improving S&T Governance, Management, and Linkages

We updated in 1999 the national health S&T plan to make it more relevant and responsive to the needs of the people and the changing topography of the times. The national health S&T plan provides the framework for and directions to the conduct of health S&T activities in the country, principally research and development, education and training, and research information promotion and utilization

We completed our survey of health research resources in the country. The survey results will guide the planning of research capability development programs for the next decade.

In 1999, we helped established the Philippine Bioethics Network, a mechanism designed to bring together concerned individuals and institutions to work on ethical concerns in health. We accepted the offer of the Johns Hopkins University – Center for Communication Program to be the POPLI E Support Center in the country. As the support center, we were tasked to facilitate the exchange of reproductive health information and make this available to researchers and decision-makers in the country.



respond to a felt need

knowledge for its sake.

rather than create

Serving the Filipino Through Health S&T

PCHRD sets up, using different approaches, research and development committees in Regions 7, 8, and 11.
 A satellite project on acute respiratory infections is used as the core for research capability development in Region 7.

The committee approach for regional health R&D development is tested in Region 8. This committee now serves as the model for other regional health R&D committees.

In Region 11, herbal medicine is adopted as the entry point for research capability development because of the existing herbal plantation in the area.

High Priority Flagship Programs

Comprehensive Program to Enhance Technology Enterprises (COMPETE)

We established in 1999 the twinning arrangement, a mechanism that puts in tandem a center of excellence (CoE) and a region-based satellite institution. The idea is that the CoE (the older t_{V} in), with its core of faculty members who have the educational qualification and track record in research, will help develop the research expertise of the satellite institution (the younger twin). This strategy is expected to fasttrack the development of research expertise and catalyze R&D in the private sector as well as enhance private sector participation in S&T activities.

We identified five CoEs that can assume the trainer role. These are the University of the Philippines Manila (UPM), and the college of medicine of the Far Eastern University Nicanor Reyes Medical Foundation (FEUNRMF), University of the East

1984

Ramon Magsaysay Memorial Medical Center (UERMMMC), University of Santo Tomas (UST), and Cebu Institute of Medicine (CIM). Four CoEs have forged an agreement with their identified twin institution. FEUNRMF will work with St. Louis University in Baguio City. UERMMMC's twin is Xavier University in Cagayan de Oro City. UST is matched with Angeles University Foundation College of Medicine in Angeles City. CIM's partner-institution is West Visayas State University College of Medicine in Iloilo City. UPM has yet to finalize working arrangements with the institution it has chosen to work with.

In the twinning arrangement, the CoEs are expected to provide training and guide the development of the satellite institution's research capability. Specifically, the CoE is expected to prepare, in coordination with the satellite, a five-year capability development plan for the said satellite and help implement the same. The CoE is also tasked to monitor, supervise, and evaluate the implementation of the plan. The satellite, on the other hand, is





 Tablet forms of lagundi (Vitex negundi L.), yerba buena (Mentha cordifolia L.), tsaang gubat (Ehretia microphylla Lam.), and sambong (Blumea balsamifera L.) produced by the National Science and Technology Authority pilot plant are listed with the Bureau of Food and Drugs for mass distribution and use. expected to show its commitment in terms of supporting the training of its staff, allocating funds for the development and or upgrading of its facilities and equipment, and providing a budget for research.



S&T Intervention Program for the Peor, Vulnerable, and Disabled

In 1999, we funded a total of 32 research and development (R&D) projects which address the needs of the poor, vulnerable, and disabled. Most (38%) of these were on drug development. Studies on communicable diseases (19%) ranked second in terms of number. This was followed by researches on degenerative and metabolic diseases (16%). Figure 1 presents the distribution of projects by priority area. Highlights of selected projects are given below.

People take it for all kinds of diseases and disorders. But our study proved that mahogany (Swietenia mahogani Jacq.) seed isn't a cure-all alternative remedy after all. Conducted by the National Integrated Research Program on Medicinal Plants (NIRPROMP), our study showed that mahogany seeds are mutagenic and toxic to the liver. They are also toxic to the central nervous system, causing decreased motor activity,

respiratory difficulty, loss of screen grip, convulsion, and diarrhea. Moreover, they depress arterial blood pressure. Our study debunked the common belief that mahogany seeds have anti-arthritic and anti-inflammatory activities. Based on these findings, we recommended that people refrain from eating raw mahogany seeds.

The potential application of selected medicinal plants for common disorders was shown in clinical validation studies made by NIRPROMP. Phase II trial



 The Ermita Health Science Community (EHSC) is organized with the University of the Philippines Manila as its nucleus. EHSC seeks to foster an interactive community of researchers, and encourage the sharing of facilities and resources such as library, laboratory, and scientific equipment.

1985

- The 2nd Health R&D Congress
- affirms the restructured National
- Health R&D Plan for 1985-1989.
- The Ministry of Health adopts
- PCHRD's herbal medicine production
- technology for its four production
- plants in Regions 2, 8, 11, and 12.
- The PCHRD Governing Council approves the National Guidelines for
- Biomedical Re-search Involving
- Human Subjects formulated by the
- National Ethics Committee.



revealed that *ampalaya* (*Momordica charantia*) tablet exhibited blood glucose lowering effect comparable to the standard drug glibenclamide prescribed for type II diabetes mellitus.

Tsaang gubat (Ehretia microphylla) tablet showed in phase II trial its effectivity for the treatment of gastrointestinal or biliary colic. Its efficacy was found to be comparable to the drug dicycloverine.

Yerba buena (Mentha cordifolia) tablet was found, in phase II trial, to be comparable to paracetamol in treating pain resulting from circumcision, postdental extraction, and episiotomy.

All four herbal products mentioned above will undergo phase III clinical trial.

Stability tests conducted by NIRPROMP revealed that *ampalaya* tablet (500 mg) has a shelf-life of three years and three months. *Yerba buena*, on the other hand, was found to be stable up to two years of storage. *Akapulko (Cassia alata* L.) antifungal lotion (50% and 100%) was shown to be stable up to four years.

We are implementing a three-year, PhP17 million R&D program on ibuprofen. This will reduce the cost of imported raw material for (S)-(+)-ibuprofen, a non-steroidal antiinflammatory drug. Now in its third year, the program has developed a diastereomeric recrystallization method and cross-linked enzymes from local plant and microbial enzyme sources for the production of (S)-(+)-ibuprofen. The results of the program will provide the local pharmaceutical industry with the technology for the preparation of the isomeric form of chiral drugs, ranging from anti-inflammatory compounds to those for cardiovascular disorders.

> On the lookout for electrophoresed products under the ultraviolet light, molecular biologist Maria Natividad Cajimat goes through one of the many steps in mapping the DNA sequence of hepatitis C virus (HCV) among chronic HCV carriers. The genotype will be correlated with disease severity, mode of infection, and response to interferon treatment.

Recognizing molecular markers in chronic HCV infections is an important input to the formulation of strategies for more effective HCV control.



1987



1986

The Health Research and Development Information Network (HERDIN) is formally established with the signing of the memorandum of agreement between the three cooperators: PCHRD, Ministry of Health, and the University of the Philippines Manila. HERDIN responds to the

need for health information in the research, academic, and health service delivery sectors.

- The Health Research and Development Committee in Region 6 (RHRDC-6) becomes the latest addition to PCHRD's health research network. RHRDCs serve as structures through which PCHRD implements its research capability development program in the regions.
- The hepatitis B research of the University of the Philippines Manila Liver Study Group leads to the inclusion of the immunization of high-risk groups in the Department of Health's Expanded Program on Immunization.
- The anti-schistosomiasis campaign in Leyte using the drug praziquantel reduces the prevalence rate of schistosomiasis from 16 percent in 1982 to 9.6 percent in 1987.
- The Coco Oil Mission represented by PCHRD Executive
 Director Quintin L. Kintanar successfully lobbies in the US Congress for the dismissal of discriminatory labeling of three tropical oils, including coconut oil, as saturated fats. Such labeling would adversely affect coconut oil consumption in the US market, which is worth \$150 million annually.





The clear area around the filter paper is where the antifungal has diffused and killed yeast cells, indicating the yeast's sensitivity to diflucan.

A survey of 264 specialists nationwide revealed that cancer pain in the country is undermanaged. Our study showed that inadequate knowledge of pain management and treatment (including choice of drug, dosage, and interval in giving the next dose) was a major factor in poor pain relief. This could be attributed to poor training in cancer pain management. Only a fourth of the respondents felt the training on cancer pain management they obtained in medical school or residency training was excellent or good. Other barriers to adequate pain management that we found, as listed by the respondents in this order, were inadequate pain assessment, excessive state regulation on prescribing analgesics, and reluctance to prescribe opiates.

Our findings point to the need to improve physicians' knowledge, attitude, and practices with regard to cancer pain relief. We are thus recom-

mending the inclusion of cancer pain education in the medical curriculum. We also see the need for a national survey on the status of the cancer pain relief component of the Philippine Cancer Control Program of the Department of Health. The survey should look into the areas of policies and regulations, training and education, and drug availability.

We conducted the first study on yeast identification ever to be conducted on a nationwide scale. Our study found nine different yeasts that may be important in different clinical situations. These included seven *Candida* species (*C. albicans*,

1989

C. parapsilosis, C. tropicalis, C. glabrata, C. pelliculosa, C. krusei, and C. guilliermondii) and two other yeasts -Trichosporon cutaneum and Cryptococcus neoformans. Of 579 yeast isolates assayed for drug sensitivity, 94 percent were susceptible to fluconazole, 5 percent were of indeterminate sensitivity, and only 1 percent was resistant. Our study finds its value in determining the chances that a patient has a fluconazole-resistant strain of yeast, and when the clinician should request speciation (which is relatively expensive) and fluconazole susceptibility assav.

Our study comparing the efficacy of using three drugs (pyrazinamide, rifampicin, isoniazid) versus four drugs (pyrazinamide, rifampicin, isoniazid, and ethambutol) for the treatment of tuberculosis will help establish whether the efficacy of the former is comparable with that of the latter. If found equally effective, the use of the three drug regimen, which costs lower, will save the Department of Health an estimated PhP50 million in TB treatment. Based on current evidence, a minimum of three drugs is recommended for the intensive phase treatment of newly

1988

 The 3rd National Health R&D Congress examines the relevance and responsiveness of PCHRD's programs to the needs of the major user of research results the Department of Health.



San Fernando, Pampanga; Cagayan de Oro City, and Davao City.

 Trainings on information systems, including the use of CDS/ISIS version 2.3 (Computerized Documentation System/Integrated Set of Information Systems) are conducted for information workers in the country.

1990

• The use of CD-ROM

demonstrated and

promoted among

information profes-

Manila, Baguio City,

sionals in Metro

and electronic mail is

- DOST Secretary Ceferino Follosco advocates a market-oriented S&T philosophy. Health programs and projects are thus assessed in terms of the returns on investment they will bring to society.
- The 4th National Health R&D Congress focuses on research utilization.

diagnosed pulmonary TB. In areas in the Philippines where drug resistance is high as shown in surveys, the four drug regimen is preferred. To ensure better treatment outcomes, better compliance using the directly observed treatment for short-course therapy (DOTS) is strongly recommended by the TB Control Service of the Department of Health.

We are establishing cell lines from primary cultures of human cancer tissues and hope to develop a bank of these cell lines for biomedical research. The cell lines will find use in the screening test for natural products with potential anti-cancer activity, thereby reducing the need for experimental animals. Thus far, we have established primary cultures of cancerous tissues of the bladder, kidney, prostate, and testis as well as maxillary bone cells.

We have turned to the ubiquitous plants for an alternative method for monitoring ambient air quality. Plants

The bank of cell lines, which includes the renal cells shown here, that Dr. Gloria Bernas is developing will be useful in the screening test for natural products with anticancer activity.



1991



Blind as he is, Rodolfo sees a future where he's fully able to enjoy his music, free from the debilitating grips of TB. Dr. Esperanza Guiuan explains that Rodolfo and others with newly diagnosed pulmonary TB can effectively use the less costly three-drug regimen for TB treatment. Buth those who manifest drug resistance are better off with the quadruple short-course treatment.

respond to pollutants in the form of changes in parameters such as leaf pH, chlorophyll level, and membrane permeability. These changes can be measured and used as a reliable indicator of exposure to air-borne pollutants. In a study conducted in Iligan City, we found that total leaf chlorophyll level in the two pollution sites studied had significantly declined compared with that in the reference site. This indicates that chlorophyll level can be used as a bioindicator of pollution. This method, however, needs to be standardized in terms of plant species and other factors. Among the five tree species (guava,

 The Science and Technology Coordinating Council approves the Philippine Pharmaceutical Action Plan. PCHRD thus focuses its research efforts on the development of the identified priority pharmaceuticals, namely strategic pharmachemicals, antibiotics, vaccines and biologicals, drugs from medicinal plants and marine resources, diagnostic reagents as well as medical devices, equipment, and laboratory for animal breeding. • HERDIN databases are made available online using dial-up packet switching technology. This development gives researchers, health professionals, program planners and implementers, policymakers, students, and teachers better access to health and related information.



jackfruit, mahogany, mango, and starapple) we studied, we found mahogany tree to be least sensitive to pollution. It could thus be used as a pollution buffer in residential areas where the pollution level is high.

We assessed the hazards that may endanger workers' as well as the general public's health and safety in five major industries (viz. electronics, petrochemical, power plant,

rubber/plastic, and textile industries) in Subic Bay Freeport Zone (SBFZ). We found the levels of chemicals of potential concern in the identified industries to be within acceptable limits. To respond to possible accidents involving industry operation within SBFZ, our project team prepared an emergency response and preparedness action program for the Subic Bay Metropolitan Authority (SBMA). A health and safety guidelines manual for SBMA was prepared as well. The guidelines were meant to promote awareness of the importance of safety consciousness to prevent accidents in the workplace.

Comprehensive S&T Program for Mindanao

Developing health innovation capacity in Mindanao

We supported the development of research capability in Mindanao. In 1999, we funded the graduate studies of three scholars from Region 10 all of whom are now at the thesis writing stage. One scholar in the masters program in clinical epidemiology graduated in 1999. He is now the officer-incharge of the clinical epidemiology unit of Davao Medical School Foundation in Davao City.

In Region 11 we put in place a mechanism for complementation of resources and efforts among member-institutions of the Health Research and Development Committee in



1993

the region (RHRDC-11). The short-term training course on biomedical research methods that RHRDC-11 implemented in 1999 with PCHRD funding generated a number of research proposals. These are now being evaluated for possible funding.

1992

- PCHRD identifies and supports seven institutions with the greatest potential to become centers of excellence in research and training. These are Cebu Institute of Medicine, Davao Medical School Foundation, Far Eastern University Nicanor Reyes Medical Foundation, Manila Central University Filemon D. Tanchoco Medical Foundation, University of Santo Tomas Faculty of Medicine and Surgery, University of the East Ramon Magsaysay Memorial Medical Center, and the University of the Philippines College of Medicine.
- The S&T Agenda for National Development or STAND 2000 espouses four major product and service groups which need S&T intervention. Under the basic domestic needs category the health sector identifies drugs, reagents, vaccines, biomedical devices, nutritional products, and traditional areas of concern as its research agenda for 1993-1998.



Democratizing access to people and information for sustainable development

In 1999, we laid the groundwork for the establishment of Internet-linked multipurpose community telecenters (MCTs) in four *barangays* (villages) in Region 12 and the Caraga Region. Equipped with reading materials, a television set, and VHS (video home system), each MCT is envisioned to serve as an information resource center that people can use and share. It is a place for connecting people to the Internet. It can also be used as a venue for literacy courses and community services, complementing the telephone and fax services provided by the *Telepono sa Barangay* (public calling office) set up by the Department of Transportation and Communication. Using state-of-the-art information and communication technologies, we aim to empower people, mobilize them into positive action, and help rural communities achieve self-reliance. We hope to achieve these by linking *barangays* to resources and development stakeholders in education, agriculture, fisheries, health, and rural enterprise development; giving the community residents access to information; and providing them the means to communicate their views on development issues.

Initially, the project will benefit the four pilot *barangays* Jaliobong in



Kitcharao, Agusan del Norte and Maguinda, Butuan City; and Taguitic and Tubod in Lanao del Norte. Drawing on the lessons and experiences gained from these pilot areas, we hope to replicate the system in the country's more than 40,000 barangays.

1994

1995

- The PhP14 million assistance to UP Manila's Institute for Socio-biomedical Research paves the way for the creation of the National Institutes of Health, a national facility for collaborative research.
- Excellence in undergraduate research is recognized through awards given by private organizations namely Gruppo Medica, Inc., and the Pharmaceutical HealthCare Association of the Philippines.
- Internet access is made available, opening a vast information resource to members of the health research network.
- The production technology for *lagundi* tablet and *sambong* tablet is transferred to Pascual Laboratories, Inc.



Lagundi tablet is indicated for the relief of mild to moderate bronchial asthma and cough. Sambong tablet is a potent remedy for kidney stone dissolution and is an effective diuretic for those with edema.

Strengthening and Sharpening Focus of Continuing Programs



Health Policy R&D

A policy study we commissioned for the Department of Health's National Drug Policy Program (Self-reliance Piłlar) revealed a lack of vision for self-reliant drug manufacturing in the country. This has led to a lack of a comprehensive policy direction that will guide government agencies and the private sector in their respective roles. The absence of policy direction, among other factors, has consequently stunted the growth of national drug companies as they are not viewed as the potential base for selfreliant manufacturing and as the government's partner in providing affordable drugs to the people.

The policy study presented an action plan that will bring about the reforms necessary to resurrect the Filipino drug industry. The plan of action aims to bring to the attention of policymakers the issues that retard the growth of the Filipino pharmaceutical industry. It also serves as a blueprint that will enhance the role of this particular sector in the development of the economy and in the provision of safe, effective, and affordable drugs to the people.

Through our initiative, a culturally appropriate and gender-sensitive interdisciplinary code of ethics was developed for reproductive health research. The code of ethics took into consideration concerns such as Filipino values (e.g., pag-galang, hiya), gender sensitivity, cultural sensitivity as well as indigenous health practices. The guidelines on ethics will safeguard the well-being and dignity of subjects and researchers in reproductive health research. The Code of Ethics in Reproductive Health Research was presented in a roundtable discussion participated in by social scientists and ethicists.

Patients undergoing non-cardiac surgery are often placed in a quandary as to when they need to be referred for

1996

 Lagundi and sambong tablets are launched in the market as Ascof[®] and Re-Leaf[®], respectively. Ascof costs up to 79 percent less than its commercial counterpart in the same therapeutic category. Re-Leaf is 40-92 percent cheaper than its commercial counterpart. It could save patients from undergoing lithotripsy, a surgical procedure which costs PhP50,000-70,000.



 The hemoglobinometer which measures the hemoglobin content of blood is enhanced into a photometer to measure bilirubin, glucose, urea, and cholesterol levels as well.



 DOST, United Laboratories, Inc., and the University of the Philippines sign a memorandum of agreement to produce the single enantiomer of (S)-(+)- ibuprofen using

(S)-(+)- ibuprofen using chirotechnology. The resulting technologies will reduce the cost of the raw material for ibuprofen, a non-steroidal anti-inflammatory drug.



pre-operative cardiopulmonary evaluation. Such referrals are not always necessary but are made a standard operating procedure. This translates to added cost on the part of the patient. To resolve this, we developed guidelines that define when and under what conditions the referral should be made. The use of the guidelines will not only obviate unnecessary cost; it will also redound to quality care.

Technology Transfer and Commercialization

From knowledge to innovation and application

Once again, our partners in industry shared our commitment to promoting the health and well-being of the Filipino. In 1999, Pascual Laboratories, Inc. and Gruppo Medica, Inc., two Filipino-owned pharmaceutical companies. separately signed a license agreement on the use of the production technology for *lagundi* pediatric cough syrup.

Developed by the National Integrated Research Program on Medicinal Plants, *lagundi* pediatric syrup has been found, in comparison with placebo, to be safe and effective for cough of moderate severity in pediatric patients.

The local production of *lagundi* pediatric cough syrup is expected to benefit the disadvantaged sector of



DOST Secretary Filemon A. Uriarte, Jr. and M Tomas Victorino Meneses (seated, second anfourth from left) sign the license agreement on the transfer of the production technology for *lagundi* pediatric syrup.

society as this will be distributed at a price lower than that of its commercial counterpart. It will address the problem of acute respiratory infections, the No. 1 cause of mortality in 12 of the country's 16 regions in 1998.







 The first Outstanding Health Research Award is given to the UP Manila Liver Study Group (UPM-LSG) and the Health Finance Development Project of the Department of Health. UPM-LSG's comprehensive study on hepatocellular carcinoma provided the basis for DOH's policy on hepatitis B immunization. The Health Finance Development Project studied the economics of implementing a national health insurance program. Ascof[®] and Re-Leaf[®] win the Silver Medal (medicine category) at the 25th International Exhibition of Inventions, New Techniques, and Products held in Geneva, Switzerland. The two products

also garner for its manufacturer, Pascual Laboratories, Inc., the Golden Shell Award Rising Star citation given by the Department of Trade and Industry for their huge potential in the international market.





Promotion and Application of Information and Communications Technology

Building and sharing knowledge for health

Recognizing that knowledge has become an important factor of production, so to speak, in policymaking, program planning and implementation, health service delivery, research, and in the manufacture of health products, we positioned ourselves to serve our clients better. Building on the competitive advantage that the Health Research and Development Information Network (HERDIN) has gained as an information resource, we continued to enhance e-Health or electronic



health information village. A one-stop information depot on the Net, e-Health engages information generators themselves to develop the information content of the village.

With the assistance of the PCHRD CD-ROM Development Team,

the CD-ROM and Web versions of the database of *Philippine Journal of Surgical Specialties* were completed in 1999 by the Philippine College of Surgeons (PCS). The country's first medical journal in CD-ROM, the database contains 1,800 searchable abstracts (with full text) published from 1946 to 1998. It also includes nine other publications of PCS.

The database on tuberculosis was completed as well. This consists of information on TB research, researchers, research organizations as well as market and business information needed by those working on or interested in TB. The database could be accessed via the Internet.

We subscribed in 1999 to two new databases in CD-ROM, namely Biomedical Collection (BC) III and BC IV. Each of these contains the full text of 15 new journal titles published in 1999 down to 1994.

We also acquired the 1999 updates of Medline and the POPLINE CD-ROM. Apart from these, we obtained the WHO *Reproductive Health Library*, an electronic review journal focusing on evidencebased solutions to reproductive health problems in developing countries.

In 1999, we served about 4,500 information requests of some 2,800 clients in the health research network, earning in the process PhP156,000.

The PCHRD CD-ROM Development Team was cited by Sen. Ramon B. Magsaysay, Jr., chair of the Senate

1997

 The diagnostic kit to test antibodies against the hepatitis B core antigen is completed. It wins the Third Prize in the Creative Research Likha Awards given during the National Inventors' Week.





- Akapulko lotion, an antifungal from Cassia alata leaves, is transferred to Pascual Laboratories, Inc.
 Akapulko lotion is estimated to cost 62 percent less than its commercial counterpart.
- Vitamin A fortification technology for coconut oil (CNO) is adopted by San Pablo Manufacturing Corp., the manufacturer of Minola cooking oil.
 Vitamin A fortification of CNO is expected to help address the problem of Vitamin A deficiency. In the Philippines, 17 children go blind everyday due to lack of Vitamin A, their vision permanently destroyed. One out of 25 preschoolers suffer from night blindness and Bitot's spots.

Committee on Science and Technology, for its innovative repackaging of the HERDIN databases into CD-ROM. The team, composed of Sonny Boy Espique, Nenita Adao, Paterlito Garcia, and Nona Avelina, was awarded a plaque of appreciation and a cash prize of PhP50,000. The HERDIN CD-ROM is the first of its kind in the Philippines. It contains in a single disk over 26,000 records of Philippine researches published from 1906 to 1998. It also includes full-text articles from 61 journals published from 1991 to 1996.



The universal testing machine may be used eventually by other researchers engaged in biomechanical devices R&D.

S&T Human Resources Development

Building the national capacity for health innovation

To accelerate the development of research capability in biomedical devices R&D, we facilitated the release of PhP7.4 million DOST grant to the University of the Philippines Manila (UPM) for the purchase of a universal testing machine (UTM) and the setting up of a biomechanical laboratory.

A UTM that is specifically designed and calibrated to simulate internal and external loads within the capacity of human physiology is a basic equipment in a biomechanical laboratory. Without



a biological UTM, prototypes of biomedical devices developed locally could not be tested. Their full potential, therefore, could not be assessed and harnessed. The availability of a UTM at UPM aims to bridge this gap.





 Diagnostic kits for costeffective diagnosis of schistosomiasis and hepatitis using the dipstick technology are developed.



• A universal testing machine which costs PhP7.4 million is purchased and installed at the University of the Philippines – Philippine General Hospital through PCHRD's coordination efforts. The UTM will enable the testing of locally developed biomedical device prototypes. This will allow researchers to assess and harness the full potential of these devices.

 The PCHRD-commissioned evaluation of the National Integrated Research Program on Medicinal Plants (NIRPROMP) recommends new directions to

strengthen the herbal medicine program. It also pushes for the implementation of NIRPROMP's multidisciplinary approach in the Visayas and in Mindanao. The UTM will initially be used in R&D activities that will test the biomechanical properties of locally manufactured external fixators for fracture fixation, banked tissues at the UP College of Medicine Tissue Bank, and biomaterials like bioceramics and bone substitutes. Eventually, the UTM may be used by other researchers in the country who are engaged in biomedical devices R&D as the current biomechanical laboratory is expanded into a national biomechanical testing laboratory. This will be primarily useful to the engineering colleges in the vicinity of UPM like Adamson University, De La Salle University, Mapua Institute of Technology, University of the Philippines Diliman, and Technical University of the Philippines.

We place a premium on biomedical devices R&D particularly because the Philippines lags behind other countries in biomedical devices development. The country remains an importer of biomedical devices and equipment. In 1996, the country imported almost US\$14 million worth of such devices. With the availability of the UTM and the establishment of the biomechanical laboratory as the first of many steps, we hope to correct this situation.

We sustained our support to our scholarship program to ensure the continuous supply of knowledge workers in the health research community. In 1999, we assisted 75 scholars. Of these, two doctoral and five masters students completed their program, 60 were ongoing, and eight were new scholars. Four other scholars continued their program under the DOST Overseas Manpower Development Program.

In 1999, one doctoral and 11 masters students completed their

dissertation and thesis, respectively under PCHRD's thesis/dissertation assistance program. Seventeen grantees continued to work on their thesis/ dissertation. Nine others were granted the same assistance in 1999.

To hone the capability of aspiring researchers, we set up the Research Fellowship Program to enable these aspirants to conduct research under the tutelage of their chosen mentor. Eight research fellows enjoyed this assistance in 1999. Of these, three completed their study while one continued to do his research. The other four were new fellows.



1998

 Building on the gains of HERDIN, PCHRD launches the e-Health information village. e-Health is a one-stop information resource on the Net where information users can access specialty databases, electronic journals, advisories, and directories.



1999

 The year-long bottom-up consultations conducted throughout the country culminates in the 5th National Health S&T Congress.



17th PCHRD Anniversary, and 5th National Health S&T Congress The technology for the production of *lagundi* pediatric cough syrup is adopted by Pascual Laboratories, Inc. anc Gruppo Medica, Inc.







Through the Regional Research Fund (RRF) mechanism, we also provide beginning researchers in the regions the opportunity to wet their feet in research. RRF gives PhP50,000 for the conduct of research that addresses a health problem peculiar to a region. In 1999, we funded 23 research projects in Regions 6, 7, 8, and 11. Of these, five were completed in 1999, 15 were ongoing, and three were new. Region 7 topped the other regions for having the most (48%) number of projects. Region 8 followed, accounting for 39 percent of the researches. Table 1 presents the distribution of the projects by region and project status.

We conducted 14 trainings in 1999. These were participated in by 400 health professionals and information workers in the health research network. Topics that were covered included, among others, biomedical research

methods, good clinical practice, pharmaceutical research, molecular approach to dengue diagnosis, and web site design and development. Table 2 lists these trainings.

We revived the functions of the dormant Northern Luzon Health

Research and Development Committee through the establishment of the Health Research and Development Committee in Region 1 (RHRDC-1). The former used to serve as the Council's research capability strengthening arm in Regions 1 and 2 as well as the Cordillera Autonomous Region. The distance between the three regions as well as natural calamities in the area, however, made it difficult for the NLHRDC members to meet and work together. To resolve this, we decided to create a health R&D committee in each of the three regions. RHRDC-1 was thus organized. The creation of a RHRDC in the other two regions is expected to follow.



RHRDC-1 is chaired by Dr. Juanito Rubio, chief of hospital, Ilocos Training and Regional Medical Center ITRMC).

able I. Distribution of RRF-funded projects by region and project status, 1999						
1	and the second second	Project Status	hereafter in		1	Participa de Carto
Region	Ongoing	Completed	New	Total	Percent (%)	famme a
Region 6	ml.	4	and the second second	1. 36.00	start from 4-1	NA ACATO
Region 7	9		2	11	48	Respected
Region 8	5	3	1	9	39	Service of the servic
Region 11	1481	at 19 and	The second	2	9	Non-Statement of the
TOTAL	15	5	3	23	100	and P

 PCHRD sets up the health R&D committee in Region 1 (composed of llocos Norte, llocos Sur, La Union, and



Pangasinan). RHRDC-1 is PCHRD's research capability development arm in Region 1.

 The HERDIN database is repackaged in CD-ROM. The first of its kind in the country, HERDIN CD-ROM contains in a single disk over 26,000 records of Philippine health researches and full-text articles from 61 journals.The PCHRD CD-ROM Development

Team is recognized and given the Sen. Ramon B.

Magsaysay, Jr. Award for IT Innovation in Health.



2000

 As it celebrates its 18th year, PCHRD positions itself to meet the challenges of health and health care in the 21st century with a stronger sense of purpose and a lusty exuberance.



Representatives of the regional office of the Department of Health, Department of Science and Technology, National Economic and Development Authority, and Commission on Population sit as members. The Don Mariano Marcos Memorial State University, Dr. Francisco Duque Medical Center, ITRMC, Mariano Marcos Memorial Hospital and Medical Center, University of Northern Philippines, and Virgen Milagrosa University Foundation are represented as well.

The mission of RHRDC-1 is to provide and strengthen the scientific and technological base for health care delivery in Region 1. Toward this end the committee will 1) identify priority regional health problems that are amenable to research; 2) identify and implement priority research programs/projects targeting priority problems; 3) establish mechanisms for research capability strengthening; 4) provide mechanisms for coordinating R&D activities in the region; 5) encourage resource sharing among institutions: 6) develop strategies to promote research utilization in the region; and 7) develop and implement mechanisms to ensure long-term

viability of the committee. Meanwhile, our regional development efforts are beginning to bear fruits. RHRDC-7 is now capable of training researchers in the Visayas region.

Table 2. Trainings conducted by PCHRD in 1999					
Title of Training	Date	Venue	No. of Participants		
8th Postgraduate course in neuroscience	27-29 Jan	Manila	72		
Training workshop on good clinical practice	15-16 Apr	Manila	40		
Training on basic research methods for medical technologists	10-15 May	Mandaluyong City	25		
Training on basic research methods for medical technologists	17-21 May	Cebu City	20		
Training on basic research methods for medical technologists	24-28 May	Davao City	20		
Seminar on good clinical practice	12-13 Aug	Davao City	15		
Web site design and development	31 Aug-3 Sep	Butuan City	15		
Short-term seminar on multidisciplinary approach to pharmaceutical- research	28 Sep	Tagig	70		
Training on basic research methods for the Philippine Tuberculosis Society, Inc.	27 Sep-1 Oct	Quezon City	20		
Training of trainers on basic research methodology	18-22 Oct	lloilo City	25		
Dengue diagnostic tool for rapid detection: Molecular approach	18-22 Oct	Quezon City	15		
Seminar-workshop on basic health research	25-29 Oct	Davao City	25		
Training of trainers on basic research methodology	3-7 Nov	Tacloban City	12		
Training on statistical analysis	15-16 Nov	Cebu City	26		

RHRDC-6 and RHRDC-7, on the other hand, are positioning themselves to train beginning researchers in their respective regions through the conduct of trainers' training on research methods.

Rewarding excellence in research

We see rewarding excellence in research as a mechanism for developing health research capability. We thus established several venues through which we can highlight outstanding research work at the student and professional levels.

Regional Researcher of the Year Award

In 1999, we launched the Regional Researcher of the Year Award. A clone of the PCHRD Outstanding Health Research Award, it seeks to promote and sustain research interest and productivity in the regions.

The Regional Researcher of the Year Award is open to individual as well as group of researchers who have made significant contribution to health care delivery. One winner from each of the three island groups will be chosen. Each will receive a cash prize of PhP100,000 and a trophy. Winners will be honored in ceremonies to be held in July 2000.



PCHRD-Gruppe Medica Outstanding Research

in Herbal Medicine Award

The PCHRD–Gruppo Medica Award for Outstanding Research in Herbal Medicine is a mechanism to encourage undergraduate students to embark on innovative research work, specifically on herbal medicine. We give premium to researches that show potential for practical or commercial application.

A group of medical students from the University of the East Ramon Magsaysay Memorial Medical Center was awarded the grand prize of PhP42,000 in the 1999 PCHRD-Gruppo Medica Award for Outstanding Research in Herbal Medicine. Led by Ida Cristina Zarraga, the group was recognized for their project titled "An in vitro assay and an electron microscopic analysis of the schizonticidal effect of Alstonia scholaris (dita) bark extract on the intra-erythrocytic Plasmodium chabaudi in ICR mice." The members of the winning group are Reynaldo Torres, Jane Tuazon, Milagros Uy, Primo Valenzuela, Richard Valenzuela, Janis Veroy, Ravi Victoria, Jaydee Vila, Myra Villamonte, Vanessa Villarosa, Richard Villegas, Tony Villena, Antonio Viray, Elena Viterbo, Francis Wei, Victor Joseph Yamat, and Xanthe Ivonne Zafra.

Earl Sitaca, a BS Biology student of the University of the Philippines in the

Visayas, copped the second prize of PhP28,000. His research investigated the bioactivity of the extract of *bulobitu-on* (*Barringtonia asiatica* Linn.) seeds.

Chemistry student Allan Patrick Macabeo of the University of Santo Tomas won the third prize of PhP14,000 for his work on the potential antitubercular indole alkaloids from *Alstonia scholaris* L.R. Brown and *Catharanthus roseus* L.G. Don (Apocynaceae).

PCHRD_PHAP_Student Research Award

Together with the Pharmaceutical HealthCare Association of the Philippines (PHAP), we annually give the PCHRD-PHAP Student Research Award to undergraduate students for research work on indigenous sources of medicine, particularly medicinal plants and marine resources. The award carries with it funding support for the conduct of the research.

This year's PCHRD-PHAP Student Research Awardees are listed in Table 3.

PCHRD-PHAP Awardees (Course)	Institution	Title of Study
Margarita Castro Leslielyn Ngo (BS Biology)	University of the Philippines Manila	Total anti-oxidant activity of fruit extracts on human low density lipoprotein
Jeryil Anne Casaul Donnabel Kuizon (BS Chemistry)	University of Santo Tomas	Marine polysaccharides: Potential inducers of angiogenesis
Patricia Parales Renato Alilio, Jr. (BS Chemistry)	University of Santo Tomas	Saponins from <i>Schefflera odorata</i> : A potential inhibitor of angiogenesis

Best Scientific Poster Exhibit Award



Now in its 10th year, the Scientific Poster Exhibit Award is given by PCHRD to health and related studies which show potential for promoting the health and improving the quality of life of the Filipinos. It recognizes research work at the student level to inspire beginning researchers to aspire for excellence in health research, and at the professional level to encourage seasoned researchers to continue generating excellent and relevant research.

Winners of this year's Scientific Poster Exhibit Contest are listed in Box 1.

S&T Promotion

Knowledge diffusion initiatives

Tapping various venues and media, we reached policymakers, program planners and implementers, entrepreneurs, health practitioners, researchers. students, and teachers with health information and technologies. In 1999, we produced 37 print materials. These included, among others, a report on the health S&T priorities in each of the 16 regions in the country, the State-of-the-art: Malaria Research in the Philippines, Filipino Men's Involvement in Women's Health Initiatives: Status, Prospects and Challenges, the Proceedings of the 5th National Health S&T Congress, as well as the Proceedings of the Symposium on Chirotechnology. By wedding traditional communication media with electronic publication. we expanded our audience coverage to reach those who hold the advantage of Internet access. Internet users were thus able to read our print materials on the Web.

We increased our visibility, particularly in the regions, through the 14 technology fairs and exhibits we participated in in 1999. Through these expositions, our clientele in different parts of the country were able to see, touch, and examine the latest health technologies generated by the health research network. The technologies we exhibited included the spring vacuum drain for head and neck surgery, wound dressing from prawn shell, biomodification of coconut oil and nonlauric oils, and the X-ray machine locally fabricated by Esphar Medical Center, Inc. These were displayed in different venues in Metro Manila as well as in Cagayan de Oro City; Butuan City, Agusan del Norte; Batac, Ilocos Norte; and Balanga, Bataan. Legislators at the Lower House and Senate as well as the Cabinet ladies also had the opportunity to view these technologies at the exhibits separately put up for them

We stimulated thought and exchange of stories, lessons, and experiences in the eight symposia we conducted in 1999. Topics covered in these fora included, among others, distance learning on emerging infections in the Asia-Pacific region, building partnership for the development of information and information services for rural development, and opening the gateway to the POPLINE database and reproductive health information resource.



Sen. Ramon B. Magsaysay, Jr. visits PCHRD's exhibit at the Philippine Senate.

Box 1. 1999 Winners in the 10th Scientific Poster Exhibit and their entries

PROFESSIONAL CATEGORY

First Prize

Dr. Ronald R. Matias, Corazon C. Buerano, Ma. Luisa G. Daroy, Ma. Giselle V. Espiritu, Deu John M. Cruz, Jhoe Antony Alfon, Jingle Candelario, Akira Igarashi, and Dr. Filipinas F. Natividad St. Luke's Medical Center, University of the Philippines Diliman, and the Nagasaki University-Institute of Tropical Medicine

"Development of an ELISA-based protocol for the laboratory diagnosis of dengue infection"

Second Prize

Dr. Edward A. Quinto

Research Center for the Natural Sciences, University of Santo Tomas

"A simple (do-it-yourself) culture media color reaction test for the rapid detection of fecal and non-fecal coliform bacteria in various types of water sample"

Third Prize

Dr. Teresita M. Espino, Ma. Marita Mangubat, Fides Z. Tambalo, and Richard D. Tambalo

National Institute of Molecular Biology and Biotechnology University of the Philippines Los Baños

"Lipase-catalyzed synthesis of an antimicrobial agent from coconut oil"

STUDENT CATEGORY

First Prize and Best Packaged Technology Dr. Sherry Ong Cua Department of Surgery, Chinese General Hospital and Medical Center

"Psidium guajava Linn. ointment: Its efficacy on burn and incised wounds (A prospective study)"

Second Prize

Paul R. Ombao and Dr. Gloria de Castro Bernas College of Science, University of Santo Tomas

"Biomaterial for wound dressing: Chitosan from *Penaeus monodon* exoskeleton"

Third Prize

Dr. Christine Aguirre and Dr. Ray Malilay Faculty of Medicine and Surgery, University of Santo Tomas

"Measurement of intra-abdominal pressures of Filipinos by use of a Foley catheter after an elective major abdominal surgery in the first 24 hours post-op: University experience"

8 Governance Improving S&T Governance, Management, and Linkages

Positioning health S&T for the 21st century: The crafting of the national health S&T plan

Recognizing the multifarious developments at the national and global fronts that impinge on health and health care, we updated in 1999 the national health S&T plan to make it more relevant and responsive to the needs of the people and the changing environment. The national health S&T plan provides the framework for and directions to the conduct of health S&T activities in the country, principally research and development, education and training, and research information promotion and utilization.

With the bottom-up approach as our guide, we solicited the health S&T priorities in the regions, elevated these to the zonal level, and finally to the national level.



To draw zonal inputs, the country was divided into six zones based on contiguity and the zonal classification used by the Department of Science and Technology and the Department of Budget and Management in the annual budget reviews. Zone 1 is composed of the Ilocos Region, Cagayan Valley, and the Cordillera Autonomous Region. Zone 2 covers Central Luzon, Southern Tagalog Region, and Bicol Region. Zone 3 includes Western, Central, and Eastern Visayas. Zone 4 encompasses Southeastern Mindanao, Western Mindanao, and Caraga Region. Zone 5 consists of Southern Mindanao, Western Mindanao, and the Autonomous Region of Muslim Mindanao. The National Capital Region represents Zone 6.

We presented the six zonal reports to a national body at the 5th National Health S&T Congress held March 17. In a nutshell, the health R&D priorities focused on communicable diseases, non-communicable diseases and lifestyle-related disorders, nutrition, environmental health, occupational health, maternal and child health, traditional medicine and health care, health care delivery concerns, and the health of vulnerable populations. These health concerns cut across the following researchable areas: technology assessment and development; epidemiology, etiology, and transmission; risk factors; improvement of treatment and management; improvement in prevention and control; assessment of current



efforts and programs; development of new approaches and strategies; and socio-cultural and behavioral dimensions.

In terms of capability development requirements, the need to develop expertise in behavioral and social sciences was unanimously prioritized in response to the identified R&D needs. Capability development in health anthropology, health economics, health management, and medical informatics was considered a priority. This, however, does not preclude the strengthening of capabilities in the medical and health-related disciplines.

The need for reliable, accurate, and timely data in decision-making and research was emphasized. Likewise, the identification and development of newer and more innovative methods of information dissemination were underscored.

We pursued advocacy efforts to promote the wide adoption of the health S&T priorities identified in the congress. Information on these priorities was disseminated in fora organized for the health R&D committee in Regions 6, 7, 8, and 11. This was disseminated as well in Regions 4 and 12.

In 1999, we completed our survey of health research resources in the country. The survey, covering 294 institutions, is expected to provide future direction in planning

research capability development programs for the next decade.

Findings indicated that the available core of trained human resources is inadequate to fasttrack the generation of health knowledge and innovations. Researchers trained in the basic and medical sciences are so few as to satisfactorily address the need to harness emerging technologies for solving health problems. Findings also showed that with a few exceptions data collection, processing, storage, and retrieval in libraries are manually done. Internet access is mainly through dial-up connection. These point to the need to upgrade library facilities to enhance access to information vital in health research

The study recommended several measures to correct the above weaknesses. Strengthening of

regional R&D capability is being urged. This calls for promoting and or strengthening linkages and networking among institutions as well as developing region-based human resources. A focused human resource development program is also recommended. The program should develop human resources in basic medical and related sciences, public health, and the health social sciences.

Lastly, an increase in institutional budget for health R&D is suggested. This is necessary to enrich academic instruction and extension services, and promote evidence-based patient management in medical centers and hospitals.

Linkages

Forging synergies for health development

In 1999, we helped give birth to the Philippine Bioethics Network (PBN), a mechanism designed to bring together concerned individuals and institutions to work on ethical concerns in health. PBN is tasked to promote adherence to ethical standards that will guard human dignity and uphold human rights. Its by-laws stipulate: 1) the promotion of multidisciplinary education and training, exchange of information, and research in bioethics; 2) encouraging the sharing of knowledge and resources among the Network's members and the public; 3) advancing the use of a gender-responsive and culturally sensitive bioethical framework to promote respect for human rights in professional practice and public policy; 4) promoting the establishment and strengthening of ethics committees in health institutions; 5) promoting ethics in education, training, research, and services; and 6) establishment of linkages with bioethics groups and other related organizations at the local, national, and international levels.

Our efforts paved the way for the partnership between ESPHAR Medical



DOST Secretary Filemon A. Uriarte, Jr. meets the IDRC Board of Governors.

Center, Inc. and Quezon Institute (QI). Through our initiative, the X-ray machine locally manufactured by ESPHAR is now being tested at QI. Called Ronngen 105, the X-ray machine has been tested in accordance with Department of Health radiation safety standards. Radiologists consulted by ESPHAR noted that the images taken by Ronngen 105 were comparable to those taken by imported machines. The clinical tests at QI will further evaluate the prototype's effectiveness.

In 1999, we accepted the offer of Johns Hopkins University – Center for Communication Program (JHU-CCP) to be the POPLINE Support Center in the country. As support center, PCHRD is tasked to facilitate the exchange of reproductive health information and make this available to researchers and decision-makers in the Philippines JHU-CCP produces POPLINE databases, the world's largest and most comprehensive bibliographic source of information on population, reproductive health, family planning, and related issues.

We hosted the Board of Governors of the International Development Research Centre (IDRC) of Canada and officials of IDRC Singapore when they came to Manila to see firsthand the IDRC-supported projects in the country. The group was composed of Ms. Maureen O'Neil, president of the IDRC Board of Governors, Dr. Jean Guy Pacquet, Ms. Marie-Angélique Savané, Dr. Mervat Badawi, Mr. Tom McKay, and Dr. Rodger Daniel Schwass. IDRC Singapore regional director Dr. Randy Spence and regional controller Mr. Wilfredo Reyes also joined the group. On our part, we presented the IDRCfunded multipurpose community telecenter (MCT) project that PCHRD facilitates (see related report on page 19)





Financial and Human Resources Management

In 1999, we had the stewardship of PhP43 million from government allotment. This is a slight improvement (12.5%) on the 1998 appropriation of PhP37.7 million. An additional PhP24.5 million generated from other sources gave a balance of PhP67.6 million (Table 4).

Grants-in-aid (GIA) funds totalled PhP14.4 million. Of this, PhP6.4 million (45%) went to S&T education and training. A third or PhP5.5 million was spent on R&D. The rest supported S&T services (16%) and technology delivery (1%). Figure 2 shows the distribution of GIA. One hundred percent of GIA funds was used in 1999.

In 1999, we utilized 98 percent of the money appropriated for us by the national government.

Particulars	Allotment	Expenditures
General Appropriations from Government	7,01	
General administration and support	9,457,401	9,438,696
Operations	19,167,238	18,223,631
Grants-in-aid		
Research and development	5,512,985	5,512,985
Technology delivery	122,696	122,696
S&T education and training	6,474,384	6,474,384
S&T services 2 08	2,360,452	2,360,452
TOTAL	43,095,156	42,132,844
Funds from Other Sources 90	24,534,150	20,424,821
GRAND TOTAL	67,629,306	62,557,665

Table 4. PCHRD's financial profile, 1999



Figure 2. Distribution of grants-in-aid, 1999

To attain greater efficiency and productivity, 44 of our personnel attended training courses and seminars related to their job. In 1999, eight of our staff were enrolled taking up masters or doctoral studies.

We designed our own performance evaluation system that will more objectively measure performance. With this system, we hope to motivate employees to increase their outputs. The system will also provide a more rational basis for staff promotion and giving of incentives. This new system is being finetuned for the approval of the Civil Service Commission.





45% Education and Training

1% Technology Delivery

38% R&D
 16% S&T Services

Challenges and Directions

Life is continually evolving. And so is health Hence, while our current programs and projects are directed, and rightly so, to answering present-day health problems, the status quo is not good enough. We will continue to push back the darkness of the unknown in health and health care and let the light of knowledge and innovation application shine on the Filipino people.

We will continue our program of developing low-cost but safe and effective drugs. This program will tap our vast indigenous plant resources as well as apply innovative technologies in drug development available today. We will develop drugs for priority problems like tuberculosis, cancer, malaria, and respiratory disorders using plant materials. We will produce drugs for priority disorders utilizing chiral technology.

To fasttrack the development of low-cost drugs, we will set up an integrated research program on medicinal plants in the Visayas. This will follow the model set by the PCHRD-funded multidisciplinary National Integrated Research Program on Medicinal Plants.

Early detection of diseases would translate to prompt treatment and prevention of the spread of disease. We will thus develop, in collaboration with the Research Institute for Tropical

Medicine, simple, rapid, sensitive as well as inexpensive diagnostic kits to detect local causative strains of priority diseases.

We will provide the elderly with locally fabricated devices for the management and rehabilitation of disorders that accompany aging. Local development of biomedical devices will not only bring down the cost of health care. It will also reduce our country's importation of such devices.

We will continue to pursue studies that will lead to the early diagnosis of prevalent communicable diseases like tuberculosis, malaria, meningitis, hepatitis, and dengue.

We will support the development of clinical practice guidelines (CPGs) in infectious diseases, **d**egenerative and metabolic diseases, mental and emotional illnesses, and occupational disorders. CPGs will assist physicians in decision making, minimize risk, and pave the way to more consistent, effective, and efficient clinical practice.

We will help accelerate technology transfer and adoption by advocating and supporting the establishment of technology and business lia:son offices in academic and research communities. To encourage the application of knowledge-based research results, we will intensify our dissemination efforts among their target users.

Fully aware of the importance of information in policy making, program planning and implementation, health service delivery, enterprise development, and research, we will expand the health research network's access to information. We will accomplish this through the setting up of digital health libraries. Through cooperative subscriptions, electronic full-text international journals will be made available to the network. This scheme will make information access cost-effective since each partnerlibrary need not subscribe, on its own, to expensive electronic full-text journals Neither do they need to set up computing and network facilities to accommodate huge databases.

Rural communities need information, too. Building on the groundwork we laid in 1999, we will put up a multipurpose community telecenter in each of the four pilot *barangays* we selected. Through this facility, residents in these communities will have Internet access to information on health, education, agriculture, fisheries, and rural enterprise development.

We will strengthen the e-Health information village by intensifying our efforts at building its content. Toward this end, we will use the distributive approach where information generators and publishers themselves sustain the generation of the village's information content.

The many questions on health and health care that need to be answered require a critical pool of researchers and knowledge workers. We will thus strengthen our support to research capability development. We will continue to provide scholarship grants, thesis and dissertation grants, research fellowships, and short-term training courses. We will maintain our support to capability development efforts in the regions to build their capability for S&T planning, management, and implementation. We will

strengthen our foothold in the regions by setting up a Health Research and Development Committee in the Cordillera Autonomous Region.

We will vigorously implement the twinning arrangement that we set into motion in 1999. We hope to see the conception of a capability development plan from the marriage of a center of excellence and its partner-institution in the region.

These are the major programs and projects we will pursue to fulfil the social contract we have forged with the Filipino people, the contract that calls for us to make a difference in their health and well-being.

The PCHRD Governing Council



Directory of Officials

Governing Council

Chairman

Dr. Filemon A. Uriarte, Jr. Secretary Department of Science and Technology

Vice Chairman

Dr. Alberto G. Romualdez, Jr. Secretary Department of Health

Members

Dr. Ernesto O. Domingo *Fellow* Philippine Society of Gastroenterology

Dr. Abraham F. Pascual President Pascual Laboratories, Inc.

Dr. Josefina L. Poblete Dean, College of Medicine Cebu Institute of Medicine

Dr. Warlito C. Vicente Dean Davao Medical School Foundation

CHED Representative

Dr. Rodolfo de Guzman Chairman, Technical Panel for Health Profession Education Commission on Higher Education

Ex Officio Members

Ms. Elsa M. Bayani Executive Director National Nutrition Council

Dr. Perla D. Santos Ocampo (1982 – October 1999) Chancellor University of the Philippines Manila

Dr. Alfredo T. Ramirez (November 1999 to present) *Chancellor* University of the Philippines Manila

Dr. Pacita L. Zara

Executive Director Philippine Council for Health Research and Development

Technical Directors

Dr. Jane C. Baltazar Dr. Bonifacio C. Dazo Dr. Adriano V. Laudico Dr. Fernando S. Sanchez, Jr. Dr. Victor C. Valenzuela Dr. Pacita L. Zara

Executive Director

Dr. Pacita L. Zara Tel. No. 837-2942 <plz@pchrd.dost.gov.ph>

Division Heads

Ms. Emelita N. de Castro Finance and Administrative Division Tel. No. 837-7536 <enc@pchrd.dost.gov.ph>

Dr. Alan B. Feranil

Research Management and Development Division Tel. No. 837-7535 <alan@pchrd.dost.gov.ph>

Ms. Teresita O. Laguimun

Officer-in-Charge Human Resources and Institution Development Division Tel. No. 837-7537 <tess@pchrd.dost.gov.ph>

Ms. Merlita M. Opeña

Research Information, Communication, and Utilization Division Tel. No. 837-7537 <mmo@pchrd.dost.gov.ph>

- Dr. Alberto G. Romualdez, Jr.
 Dr. Perla D. Santos Ocampo
- 3. Dr. Filemon A. Uriarte, Jr.
- 4. Ms. Elsa M. Bayani
- 8. Dr. Warlito C. Vicente 9. Dr. Ernesto O. Domingo

6. Dr. Josefina L. Poblete

7. Dr. Abraham F. Pascual

5. Dr. Pacita L. Zara

Organizational Structure



