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PCHRD ANNUAL REPORT '98

MESSAGE FROM THE CHAIRMAN

Congratulations to the men and women of the Philippine Council for Health Research and Development (PCHRD) for their valiant and dedicated efforts to advance the health of Filipinos despite the Council's meager resources.

The health sector is one of the most visible areas by which the public can gauge the progress of the Estrada administration's pro-people programs. Indeed, one of the hallmarks of a truly progressive nation lies in the quality of well-being of its human resource.

I am, therefore, pleased that PCHRD is already charting the future for the next generation of Filipinos through the National Science and Technology Plan 1999-2004. The Council is also ensuring equitable access to health care by translating R&D into actual products and services that advance the public's quest for affordable healthcare.

Consistent with its pioneering spirit, PCHRD has also started to tap the immense possibilities of information technology to introduce the local health scene to the larger global medical and health community through its specialty databases in CD-ROM format and the e-Health information village.

Given PCHRD's passion for excellence, I am confident that the future looks bright for the Philippine health scene in the next millennium.


William G. Padolina
Chairman

PCHRD Governing Council, and
Secretary
Department of Science and Technology



MESSAGE FROM THE EXECUTIVE DIRECTOR



Partnerships in action. These sustained us in 1998 as we tried to scale new heights in generating health knowledge and technologies. As we celebrated in 1998 the centennial of our country's independence, we also reveled in the many partnerships that allowed us to gain a greater foothold in the consciousness and in the very lives of our target beneficiaries.

The report that unfolds in the following pages gives us encouraging evidence of how much we can accomplish if we work together in "conquering suffering and enriching humanity."

Our partners in industry kept faith in our commitment to the health of the Filipino and saw the health and economic value of the technologies we developed. They manifested their faith by commercially producing and marketing *lagundi* and *sambong* tablets, *akapulko* lotion, and Vitamin A-fortified coconut cooking oil.

Our partners in the health research network unstintingly shared their knowledge, their wisdom, and their expertise. These enabled us to assess what we have done so far in the National Integrated Research Program on Medicinal Plants, to look at these accomplishments from a fresh perspective, and move from there in terms of crafting new policy, using a different strategy, shifting our paradigm. These also allowed us to lay the foundation for a National Health Science and Technology Plan that draws its substance from the experiences of and lessons learned by our partners in the regions.



Our partners generously gave financial support to allow us to reward excellence in research, provide incentives to our researchers, finance scholarships, promote our technologies, and pursue information technology development and use.

Our partners see health as we do — an essential and necessary component of the development process that is shaping our society. As we step in the threshold of the third millennium, we hope to build on the successes of our partnerships, sustain, even accelerate them so that we may continue to develop new tools, techniques, products, and services that will see the Filipinos through the 21st century.


Pacita L. Zara, M.D.
Executive Director

Philippine Council for Health Research
and Development

Onward and upward. This was the battlecry that the Philippine Council for Health Research and Development (PCHRD) chanted as it fought, with meager resources, to advance the health of Filipinos through research and development.

Infected with the fervor with which the battle for freedom was waged a hundred years ago, PCHRD zealously kept to its commitment of freeing the Filipinos from the fetters of disease and disability by providing the scientific and technological base for health care delivery. In keeping with the spirit of the centennial of Philippine independence, PCHRD strived to make some significant strides in 1998. These are presented in the following pages.

Highlights

POLICY FORMULATION

The National Health Science and Technology Plan 1999-2004: Laying the cornerstone for the 2020 health scenario

PCHRD started to lay the groundwork for the realization of the 2020 health scenario articulated in the Department of Health's 1999-2020 National Health Plan. This scenario is envisioned as one where Filipinos enjoy a longer life expectancy with less disability. It is also one where communicable as well as chronic diseases are under control, infant and maternal deaths are reduced, and the population is well-nourished.

The health landscape 22 years hence is expected to provide a supportive environment for health through policies that ensure access to appropriate health care, safe drinking water, sanitary waste disposal, and control of environmental pollution and hazards. It is also envisioned to have a health industry that supports self-reliance in the production of globally competitive drugs,

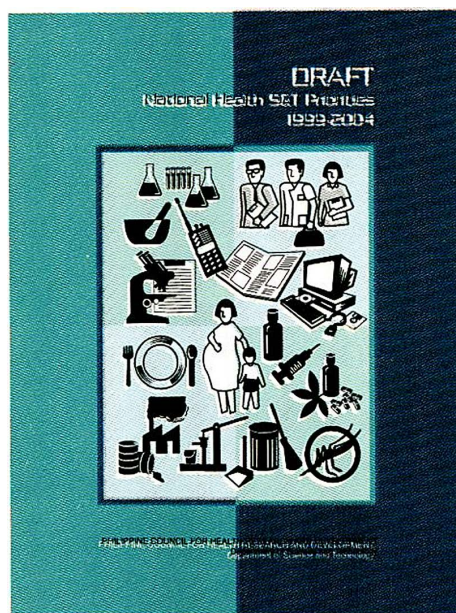
vaccines, biologicals, and biomedical devices.

PCHRD seeks to contribute to this vision of well-being by developing knowledge and technologies needed to improve health in the next century. To realize this objective, PCHRD defined three things. It identified researches that will address priority health problems, human and institutional resource requirements needed to implement the identified researches, and strategies that will help promote research results and ensure their utilization by policymakers, health professionals, researchers, program implementors, students, and teachers. These priorities were drawn through broad-based consultation with stakeholders in health, including the disadvantaged sectors in society.

To determine the priorities, PCHRD grouped the different regions into six zones. The grouping was based on the regions' contiguity and on the grouping used by the DOST Inter-council Committee in its review of government agencies' R&D budget and activities. Zone 1 is composed of Regions 1 and 2 as well as the Cordillera Administrative Region (CAR). Zone 2, on the other hand, is made up of Regions 3, 4, and 5. Regions 6, 7, and 8 comprise Zone 3. Zone 4 consists of Regions 10 and 11, and the CARAGA Region while Zone 5 covers Regions 9 and 12 as well as the Autonomous Region of Muslim Mindanao (ARMM). Zone 6 covers the National Capital Region (NCR).

A convenor as well as regional technical paper writers and coordinators were selected for each zone. These experts were tasked to lead the collection of data needed to draw up the health S&T priorities in each zone. Data were generated through a variety of methods which included secondary data analysis, indepth interview, and focus group discussion.

The identified priorities will serve as the basic substance of the National Health Science and Technology Plan 1999-2004 which will be presented in a national congress/consultation in early 1999.



Health research resources assessed

To backstop PCHRD's vision of developing knowledge and technologies for health improvement, the Council assessed how well the country's research resources can support the continuous generation of health technologies.

A survey of 294 institutions in the country conducted by PCHRD revealed that only a little more than half (57%) of the respondents engaged in health research during the period 1990 - 1995. The survey covered public and private academic institutions, public and private medical centers, government line agencies, and non-government organizations. Institutions listed under the Commission on Higher Education, tertiary hospitals under the Department of Health (DOH), and members of the health research network of DOH - Essential National Health Research were included as well. The survey was undertaken to provide future direction in planning research capability development programs for the next decade.

The study further showed that while a core of trained human resources is available, this is inadequate to fast track the generation of health information and technologies. A significant number of researchers (18%) are armed only with basic undergraduate degrees. Meanwhile, researchers trained in the basic medical and allied sciences are so few as to satisfactorily address the need to harness emerging technologies for solving health problems.

Findings indicated 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 above situation is further compounded by the lopsided distribution of health research resources. Survey results showed that agencies doing health research are unevenly distributed in the country with a distinct concentration in the National Capital Region (NCR).

The study recommended several measures to correct the above weaknesses. Strengthening of regional R&D capability was urged. A focused human resource development program was 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 was suggested. This is necessary to enrich academic instruction and extension services, and promote evidence-based patient management in medical centers and hospitals.

TECHNOLOGY TRANSFER

Delivering the dividends from R&D

Research utilization is the established touchstone of relevant R&D. The Council thus continued its efforts to ensure that technologies generated from PCHRD-funded researches are used by the health care industry and eventually by consumers.

Akapulko lotion, antifungal

In 1998, the Council signed a license agreement with Pascual Laboratories, Inc. that gives the latter the right to use the technology for the production of *akapulko* (*Cassia alata* L.) lotion.

Akapulko lotion is clinically proven as an effective treatment for tinea versicolor locally known as *an-an*. Clinical trials established its safety and efficacy in comparison with commercially available antifungals, particularly sodium thiosulfate.

The commercial production of *akapulko* lotion will make available an antifungal preparation that has none of the side-effects its synthetic counterparts usually have. The local availability of *akapulko* leaves, the major ingredient of *akapulko* lotion, is expected to reduce the cost of this dermatologic preparation.





Vitamin A fortification of coconut oil

Through a licensing agreement with PCHRD, San Pablo Manufacturing Corporation (SPMC), producer of Minola cooking oil, will have for five years the use of the Vitamin A fortification technology for coconut oil. This technology was developed by the Food and Nutrition Research Institute (FNRI) through funding support from PCHRD and SPMC.

The FNRI fortification technology specifies the adequate amount of fortificant needed. It also indicates the temperature of the cooking oil as well as the stage of cooking oil production where the fortificant should be added.

Quality control and assurance systems carried out by FNRI will ensure that the final product cooked in Vitamin A-fortified coconut cooking oil will contain at least one third of the Recommended Dietary Allowance of Vitamin A for Filipinos equivalent to 175 micrograms retinol. Vitamin A in the packaged cooking oil is stable for six months to one year.

Recognizing the value of Vitamin A-fortified cooking oil in addressing the Vitamin A deficiency problem, the Department of Health stamped the product with the *Sanghap Pinoy* seal.



For export: Herbal products
proudly Philippine made

Lagundi (*Vitex negundo* L.) and *sambong* (*Blumea balsamifera* L.) tablets manufactured by Pascual Laboratories, Inc. (PLI) under the brand names Ascof and Releaf, respectively, as well as *akapulko* (*Cassia alata* L.) lotion will soon be available in other parts of the world. This comes in the heels of the signing of the supplemental agreement between PLI and PCHRD on the exportation of the three products (the licensing agreement on the transfer of the production technology for *lagundi* and *sambong* tablets was signed in 1995).

Lagundi is indicated for the relief of mild to moderate bronchial asthma and cough. *Sambong*, on the other hand, is a potent remedy for kidney stone dissolution. It is also effective as a diuretic for those with edema. *Akapulko* is an effective antifungal. The three preparations are products of more than two decades of scientific validation and clinical studies conducted by the PCHRD-funded National Integrated Research Program on Medicinal Plants.



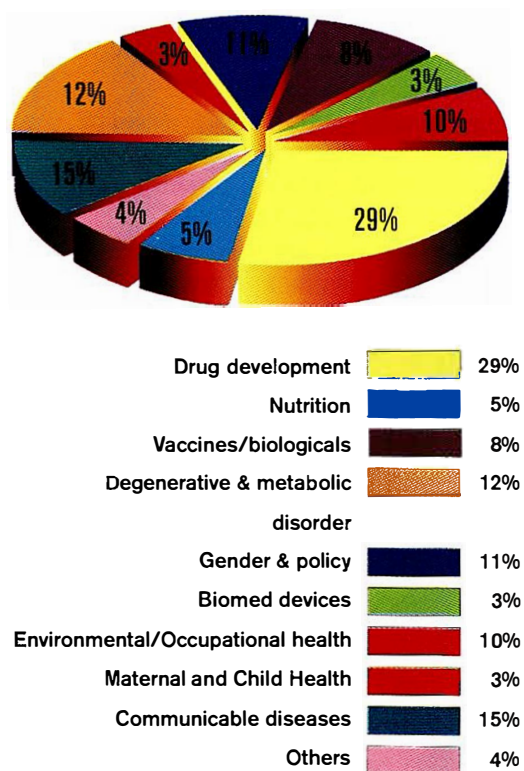
Program Reports

RESEARCH MANAGEMENT AND DEVELOPMENT PROGRAM

Generating knowledge and technologies for health

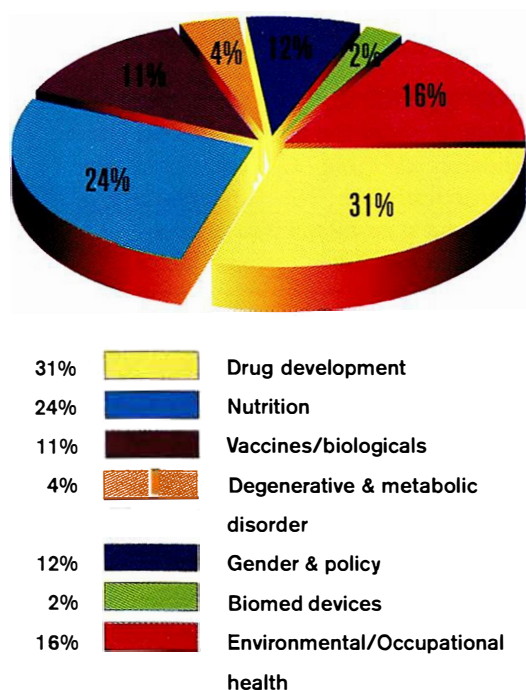
In 1998, PCHRD funded 73 research projects intended to generate knowledge, tools, products, and procedures for disease management and control as well as health promotion. The largest chunk (29%) of the projects pie went to drug development. The next largest was on communicable diseases (15%). This was followed by degenerative and metabolic disorders (12%). The distribution of PCHRD-funded projects by priority area is shown in Figure 1. Annex 1 lists the projects assisted by PCHRD in 1998.

Figure 1. Distribution of PCHRD-funded projects by priority area, 1998



Some 57 projects funded by DOST and other agencies were monitored by the Council. Almost a third of these (31%) were on drug development. One fourth of the projects were on nutrition (24%). Projects on environment and occupational health comprised a sixth of the projects (16%). Figure 2 presents the distribution of PCHRD-monitored projects by priority area.

Figure 2. Distribution of PCHRD-monitored projects by priority area, 1998



HUMAN RESOURCES AND INSTITUTION DEVELOPMENT PROGRAM

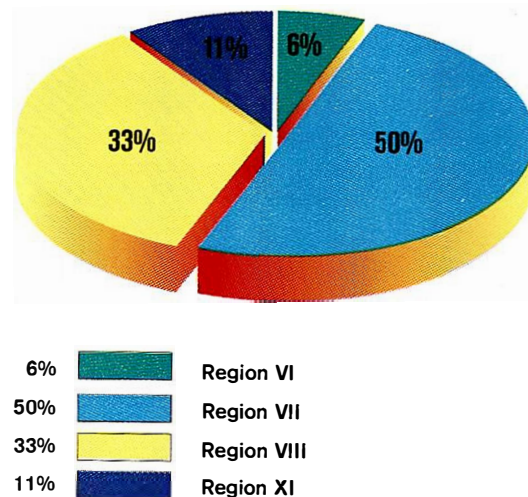
Fostering a strong research force

A continuous supply of knowledge and technologies for health can only be ensured through a research force that continually renews, updates, and enhances its knowledge system. PCHRD thus sustained its efforts at fostering a critical mass of health researchers. In 1998, the Council supported a total of 74 scholars in the masters and doctoral programs. Another five scholars were given assistance through the Bases Conversion Fund. Of the total number of scholars, 70 were ongoing while three were new. Six scholars completed their programs. The distribution of scholars by field of study is presented in Table 1. Annex 2 gives the list of scholars.

With PCHRD support, six research fellows worked under the tutelage of their chosen mentor. Of these, two completed their research project. The rest continued to work on their researches. Annex 4 provides the list of research fellows.

To provide research opportunities for beginning researchers in the regions, PCHRD initiated the Regional Research Fund (RRF) mechanism. RRF gives a grant of PhP50,000 to meritorious research projects. In 1998, PCHRD funded 18 researches in Regions 6, 7, 8, and 11. Of these, three were completed in 1998; 15 were ongoing. Region 7 had the most number (50%) of RRF-funded projects. Region 8 followed closely with 33 percent of the total number of projects. The regional distribution of RRF-supported studies is shown in Figure 3.

Figure 3. Regional Distribution of RRF-funded projects, 1998



The Council conducted in 1998 13 trainings that benefited some 416 health and information professionals. The trainings covered various subjects including basic research methods, phytochemistry techniques and bioassay, gas chromatography, data management using the CDS/ISIS software, and information presentation using HTML (hyper-text mark up language). Table 2 enumerates these trainings.

A total of 35 health professionals enjoyed the thesis/dissertation assistance provided by PCHRD. Of these, three were new while the rest were ongoing. Seven completed their masters thesis in 1998. The names of thesis/dissertation assistance grantees are listed in Annex 3.

Table 1. Distribution of PCHRD scholars by field of study, 1998

Field of Study	Ongoing	Completed	New	Total
Ph.D.				
Health promotion and education	9			9
Medical microbiology	2			2
Biochemistry	1			1
Biological science	1			1
Chemistry	1			1
Clinical psychology	1			1
Environmental science	1			1
Maternal and child health and nutrition	1			1
Molecular biology and biotechnology	1	1		2
Nutrition	1	1		2
Pathology	1			1
Pharmacy	1			1
Pharmaceutics	1			1
TOTAL	22	2		24
MS				
Clinical epidemiology	21	2	1	24
Epidemiology	7			7
Microbiology	7		1	8
Biostatistics	5			5
Pharmacy	3			3
Biochemistry	1			1
Nutrition	1			1
Parasitology	1			1
Physiology	1			1
Public health		2	1	3
Statistics	1			1
TOTAL	48	4	3	55

Table 2. Trainings conducted by PCHRD, 1998

Title of Training	Date	Place	No. of Participants
Training on basic research methods Part II. Data analysis	21-23 Jan	Manila	18
Training on gas chromatography	18-20 Feb	Manila	30
Training on basic research methods for Batangas Regional Hospital	27-28 Mar	Batangas City	38
HTML (Hyper-text mark up language) basics	19-21 Jun	Manila	10
Presentation of 5th biomedical research methodology training	14& 22 Jul	Manila	40
8th Inter-regional presentation of PCHRD-RHRDC (Regional Health R&D Committee) completed projects	29-31 Jul	Tacloban City	30
Training on Mini-micro CDS/ISIS (Computerized Data System/Integrated Set of Information Systems)	3-5 Aug	Manila	10
Seminar-workshops on phytochemical techniques and bioassays	19-21 Oct	Musuan, Bukidnon	30
2nd Biomedical research methodology training for Region 7	19-29 Oct	Cebu City	14
Training on basic research methods	26-30 Oct	Bacolod City	38
Training on basic research methods	9-13 Nov	Tacloban City	25
Training on Mini-micro CDS/ISIS	19-27 Nov	Manila	8
4th Annual regional health research forum	15-16 Dec	Tacloban City	125

Recognizing excellence in research

PCHRD feted the craftsmen of relevant and excellent research. Recognition of exemplary studies is intended to encourage seasoned researchers to continue generating world-class research, and inspire beginning researchers to aspire for excellence.

2nd Outstanding Health Research Award

In 1998, PCHRD gave the 2nd Outstanding Health Research Award (OHRA). Also called *Parangal Saliksik Pangkalusugan*, OHRA recognizes the work of an individual or group that has been able to demonstrate the link between research and utilization. This link should be evident in the absorption or use of the research outputs in the health delivery system. The award is given in two levels: the biomedical, and health services research categories. OHRA provides a cash prize of half a million pesos and a trophy for each category.



This year's winners were the Malaria Study Group of the Research Institute for Tropical Medicine of the Department of Health for health services category, and the National Poison Control and Information Services (NPCIS) of the University of the Philippines Manila for biomedical research.

The Malaria Study Group was cited for its seven-year study on malaria transmission and its community-based intervention program which led to the dramatic reduction of malaria cases to almost nil level in Morong, Bataan.

On the other hand, NPCIS was recognized for putting in place an improved reporting system for acute poisoning. It was cited as well for alerting physicians, employers and employees, small-scale miners, plantation workers, farmers, fisherfolk, and the public to the early recognition of environmental hazards through its 24-hour telephone information service, training programs, monographs, guidelines, publications, and information dissemination and toxico-vigilance activities.

PCHRD-Gruppo Medica Award

Undergraduate students of pharmacy and chemistry get the chance to be awarded for innovative research work in herbal medicine through the PCHRD-Gruppo Medica Award. The award gives cash prizes of PhP60,000, PhP40,000, and PhP20,000 to the top three research projects that show potential for practical or commercial application.

In 1998, Madonna Tayco of the University of the Philippines Manila copped the grand prize. She was cited for her entry on the blood cholesterol lowering effect of cashew (*Anacardium occidentale L.*) on hypercholesterolemic mice.

The second prize went to the team from the University of Santo Tomas composed of Charlotte Jennifer Calonge, Ma. Marilon Consulta, Wilma Anthea Chua, Edmar de la Torre, and Nathaniel Santos. Their work on saponin from *lima-lima* (*Schefflera odorata*) as a potential signal transducer in cultured human cells won them the award.

Noel Quiming, also of UP Manila, got the third prize for his study on the antigenotoxicity of avocado (*Persea americana* Mill.) leaves.

PCHRD-PHAP Student Research Award

Also open to undergraduate students is the PCHRD-PHAP (Pharmaceutical HealthCare Association of the Philippines) Student Research Award. This provides funds for research on indigenous sources of medicine, particularly medicinal plants and marine sources.

Winners of the 1998 PCHRD-PHAP Student Research Award are listed in Table 3.

Table 3. 1998 PCHRD-PHAP awardees

Name of Student	Institution	Title of Study
Paul R. Ombao	University of Santo Tomas	Biomaterial dressing for wound burn: Chitosan from <i>Penaeus monodon</i> shells
Conrado D.O. Vidad, Jr.	University of the Philippines Manila	A study of the hepatoprotective activity of a single variant of <i>Allium cepa</i> Linne (Alliaceae) against paracetamol-induced hepatotoxicity
Hie Lorenil A. Tangga-an	Cebu Doctors College of Medicine	Potential larvicidal effect of <i>guayabano</i> (<i>Anona muricata</i> L.) leaf extract on <i>Aedes aegypti</i> mosquito
Kay D. Pioquinto	University of the East Ramon Magsaysay Memorial Medical Center	A comparative in-vivo study of the wound healing property and the antibacterial effect of <i>Carica papaya</i> extract versus mupirocin ointment against <i>Staphylococcus aureus</i>

Best Scientific Poster Exhibit Award

The Best Scientific Poster Exhibit Award is given annually by PCHRD to health and related studies which indicate potential for benefitting the Filipino population. It recognizes research in the student and professional levels. The poster exhibit contest is held in celebration of the annual National Science and Technology Week in July.

In the professional category, the top prize worth PhP25,000 went to the research on the biomodification of coconut oil and non-lauric oils for the production of specialty fats and oil. This was submitted by the team led by Dr. Laura J. Pham of the National Institutes of Molecular Biology and Biotechnology of the University of the Philippines Los Baños.

Meanwhile, the study on linearmycins as novel linear polyene antibiotics copped the grand prize of PhP15,000 in the student category. This same entry won the Best Packaged Technology award. Ursela Guce-Bigol of the University of the Philippines Manila authored the study.

The complete list of winners is listed in Box 1.

Box 1. Winners in the 9th Scientific Poster Exhibit and their entries

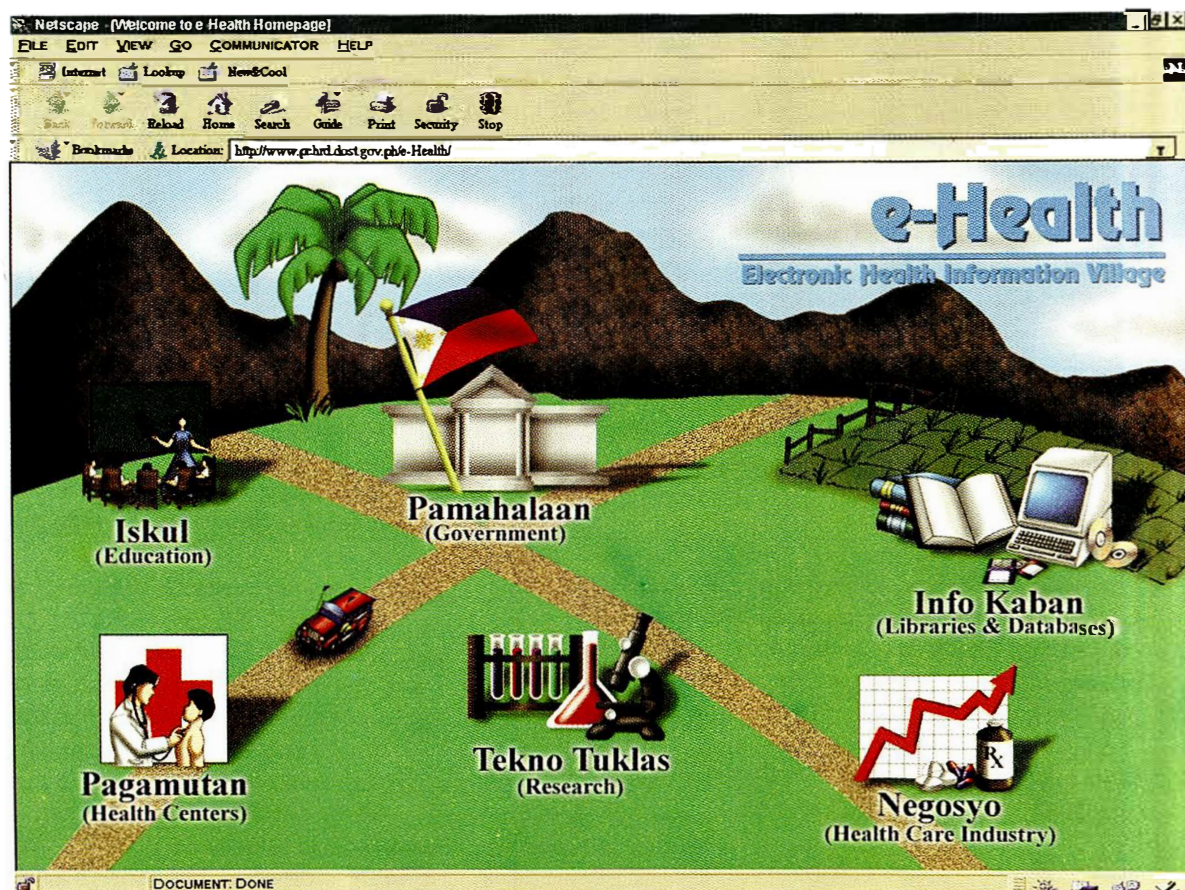
Professional Category	Student Category
First Prize	First Prize and Best Packaged Technology
<p>Dr. Laura J. Pham, Myla A. Gregorio, Edmar P. Casa, and Precy M. Rasco National Institutes of Molecular Biology and Biotechnology University of the Philippines Los Baños</p>	<p>Ursela Guce-Bigol University of the Philippines Manila</p> <p>"Linearmycins, novel linear polyene antibiotics"</p>
<p>"Biomodification of coconut oil and non-lauric oils for the production of specialty fats and oils"</p>	Second Prize
Second Prize	<p>Ma. Cristina Ramos University of Santo Tomas</p>
<p>Luz P. Acosta, Fe F. Aligui, Genevive Hernandez, Dr. Gemiliano Aligui, and Dr. Remigio Olveda Research Institute for Tropical Medicine</p> <p>"Development of an immunoblot 'dipstick' assay for the detection of circulating <i>Schistosoma japonicum</i> antigen in the urine using locally produced monoclonal antibodies"</p>	<p>"Killing cancer cells softly"</p>
Third Prize	Third Prize
<p>Annabelle A. Briones, Wilhelmina O. Ambal, Merle A. Villanueva, Romulo R. Estrella, Melchor Valdecañas, Emil Ricaforte, and Raymond Pacis Industrial Technology Development Institute Department of Science and Technology</p> <p>"Carrageenan capsules as substitute for gelatin capsules"</p>	<p>Dr. Filipina T. Cevallos, Dr. Regie Lyn P. Santos, and Dr. Mariano P. Caparas Department of Otorhinolaryngology, University of the Philippines- Philippine General Hospital</p> <p>"Spring vacuum drain: A new closed suction drainage system for selected head and neck surgeries"</p>

RESEARCH INFORMATION, COMMUNICATION, AND UTILIZATION PROGRAM

Filling in the information needs of a knowledge society

Information forms the basic fiber with which the fabric of health policies, clinical decisions, production processes, intervention programs, research designs, and learning is woven. PCHRD shares in this creative process by providing the various stakeholders in health with relevant and timely information.

In 1998, PCHRD, through its HERDIN Online initiative, served 7,245 information search requests of 3,051 users. This was made possible by tapping the wealth of information that the World Wide Web stores as well as the databases, both foreign and local, that PCHRD acquired for its clients.





The e-Health initiative: Expanding the connectivity map in the health sector

In 1998, PCHRD assembled the building blocks so to speak of the electronic health information village established the previous year, and expanded the connectivity map in the health sector.

e-Health connects people and organizations that are making a difference in health care. It's a place to find the information people need when they need it. It's a venue to communicate with others as peers, as health professional and patient, as student and mentor, and as researcher and information source. In this community on the Net, community members — information providers, processors, and users — interact, build, and share information resources.

To develop the information content of e-Health, PCHRD established connections with people working in groups. It is tapping specialty groups to develop information resources on surgical specialties, tuberculosis, biomedical devices, malaria, and health libraries.

In 1998, the surgical specialties database in CD-ROM produced by the Philippine

College of Surgeons (PCS) was completed. It was initially introduced in the PCS 54th Annual Clinical Congress held December 1998.

The e-Health seminar series was launched as another building block of e-Health. The series sought to open up discussions on what is happening and what should be happening in the health sector in terms of applications and information content development. Five seminars were conducted since the launching of the series in July 1998. These delved on the following topics: the use of information and communication technologies (ICT) in distance learning and research, ICT applications in health care delivery, Y2K (millennium bug) compliance and preparedness in the supplier-provider-patient chain, electronic publishing and digital libraries, and health information standards.

As an offshoot of the seminar on Y2K, a study group led by the UP Manila National Institutes of Health was formed to draft the guidelines for checking Y2K compliance in the health sector. The study group is composed of representatives of academe, PCHRD, the Department of Health, the Presidential Commission on Y2K Compliance, the organization of medical suppliers, the hospitals group, and pharmaceutical companies.



Widening the Filipino's choices in health

Human development through expansion of the Filipino's choices in health. This was what the Council aimed to accomplish in developing technologies for health. And through various communication media, PCHRD brought to the knowledge of research end-users the array of technologies the Council had generated for the people's selection.

Through technology fairs, exhibits, printed materials, radio and television broadcasts, meetings and symposia, linkages with the tri-media, and electronic publishing, PCHRD disseminated information on *lagundi* syrup (pediatric dose), immunoblot dipstick assay for *Schistosoma japonicum* diagnosis, Vitamin A fortification technology, ventilator weaning parameters, radiation-sterilized amnions for clinical application, prosthetic and orthotic devices, and manual resuscitator to mention a few.

The *lagundi* syrup, the immunoblot dipstick assay for *S. japonicum* diagnosis, and the e-Health exhibit particularly generated considerable interest at the 9th DOST Annual Science and Technology Fair held 13-17 July 1998 at the Philippine Trade Training Center, Pasay City, and in the 5th ASEAN Science and Technology Week held 9-16 October 1998 in Hanoi, Vietnam.

Lagundi syrup is a proven safe and effective relief for cough. A randomized double-blind, placebo-controlled clinical trial conducted by a University of the Philippines College of Medicine research group among children aged 6-17 showed that *lagundi* is effective and safe for cough of moderate severity in comparison with placebo.

The availability of *lagundi* syrup will help address the problem of acute respiratory infections which cause untold suffering and even death among children.

The immunoblot dipstick assay is a fast, easy, and more sensitive method for diagnosing *S. japonicum* infection. It employs the dipstick technique, making it a more sensitive and less cumbersome diagnostic tool for *S. japonicum* infection than the Kato Katz procedure. It uses urine sample, thus providing a substitute for stool diagnosis and eliminating the inherent limitations of using stool for assessing infection status. The immunoblot dipstick assay offers speed in diagnosis: results can be obtained in less than two hours.



With its cost much less than that of the commercially available kit, the dipstick assay is ideal for a sustained intensive schistosomiasis control program. Over 300,000 individuals are infected with intestinal and chronic hepatosplenic schistosomiasis and about 6 million are at risk of getting the infection. Schistosomiasis accounts for an estimated annual loss of PhP375 million to the country's resources.

By instilling awareness of these research outputs, PCHRD creates an environment where people and the health care industry can seek more information about the technologies, test their effectiveness, make a choice, and hopefully, use the technologies.

LINKAGES

Synergism in partnerships

PCHRD forges sustaining partnerships with individuals, groups, and organizations in the private and government sectors. By building on these alliances, the Council is able to generate impact that is greater than the total effect of isolated, individual initiatives. This synergism was evident in a number of landmark projects that PCHRD spearheaded in 1998.

PCHRD and partners in industry, consumer group, academe, and government assess and chart NIRPROMP's future

PCHRD evaluated and charted the future of the National Integrated Research Program on Medicinal Plants (NIRPROMP). This was done with the help of the Institute for Training Evaluation and Research, a private consultancy group, and the various stakeholders in herbal medicine development in the country. NIRPROMP has been doing medicinal plants research for more than two decades with PCHRD funding support totalling PhP26.4 million from 1977 to date.

The evaluation was made at the macro and micro levels. The former examined how local herbal drugs fare vis-a-vis existing national and global trends and priorities. The latter, on the other hand, had two components. The first documented the Program's priorities, activities, and accomplishments in relation to NIRPROMP's stated mission and objectives. It documented as well the problems and constraints experienced in program implementation. The second component

analyzed the impact of NIRPROMP on the nature and extent of herbal medicine use by health workers and the general population.

Among other things, the macro evaluation revealed a strong policy support for herbal medicine but weak financial assistance for government projects. It further showed that multilateral trade treaties offer both opportunities and problems such as harmonization of good manufacturing practices, and improved trade versus patent issues that may favor foreign companies as well as dumping of imported herbal products.

The micro evaluation, meanwhile, indicated that at the program level, NIRPROMP was besieged by both operational and technical problems. These included logistic and administrative problems due to policy shifts at PCHRD, funding cut for the agricultural component of the Program, part-time involvement of major researchers, and the need for an overseer to orchestrate the different activities of the Program.

The second component of the micro evaluation used a survey of 1,371 households and 262 health professionals to examine the knowledge, attitudes, and practices as well as utilization patterns with regard to herbal medicine. Findings showed that majority (91%) of household respondents were aware of herbal medicine. Some 70 percent of the respondents had actually used herbals.

Most (95%) of the health professionals surveyed, specially midwives and *barangay* health workers, knew about herbal medicine. Private doctors were the least aware of herbal medicine. Four fifths (84%) of the respondents had actually prescribed herbal medicine.

Representatives from industry, consumer group, academe, and government recommended continued support for NIRPROMP. The Program, however, should have a multidisciplinary and multisectoral nature. It should develop a strategic plan that enunciates a clear vision and mission, goals, and objectives. A program manager was recommended to oversee the plan's implementation, and administer the Program.

In addition, the continuation of the Program's Mission I and the strengthening of Mission II were urged. Specifically, the community-based component of Mission I should be strengthened in cooperation with local government units, people's organizations, and non-government organizations. Mission I seeks to develop and promote the use of galenicals and dosage preparations from crude plant materials. Mission II, on the other hand, aims to develop drugs from semi-pure and pure plant materials.

The development of databases on medicinal plants was underscored. These were deemed vital to and necessary in research and informing the public about herbal medicine.

PCHRD and champions of laboratory animal development promote LARDS

PCHRD, together with Dr. Noel Miranda of the International Non-clinical Assessment Research Philippines, Inc., led the promotion of laboratory animal resources development and standardization (LARDS). The move was initiated to address the need to be globally competitive by complying with strict international standards and regulations for product quality assurance. This was also in compliance with the

Animal Welfare Act of 1998 (RA 8485) which requires the efficient use and ethical care of animals for research, testing, and biological production.

A steering committee and a technical working committee (TWC) were organized to address issues related to LARDS. TWC identified as priority the assessment of existing resources, services, and policies



on the care and use of laboratory animals, and the formulation of guidelines and standards on the scientific and ethical use and care of laboratory animals. The technical working committee also deemed important the establishment of a central supply of standardized laboratory animals through the private sector, as well as "laboratory animals networking."

PCHRD: At the nexus of research-academe-industry linkage development

To foster a strong research-academe-private sector linkage, PCHRD led the committee on the promotion of linkages in crafting and implementing an action plan that will create a conducive environment for research-academe-industry partnership to flourish. This move was made in response to the 10-point action program of the Estrada administration.

The process of collecting data for the action plan enabled PCHRD to interact with key players in industry, academe, and government organizations. Data were obtained through a survey of 13 DOST agencies, 5 government line agencies, 40 academic institutions, and 118 industry respondents. Roundtable discussions with the chief executive officers of 10 selected companies, and presidents of selected private and state universities were employed as well. These discussions were ably facilitated by partners from the Asian Institute of Management.

The action plan drawn from the various partners outlined the strategies that are likely to enhance research-academe-industry linkage. It also identified programs that will operationalize the strategies.

The strategies include improving the research community's knowledge about industry and vice-versa, speeding up product development through joint research-academe-industry projects, and increasing the number of science and technology practitioners. They also include putting in place the needed institutional mechanisms, and increasing resources for S&T.

PCHRD rekindles kinship with old ties

PCHRD once again worked with its "old" partners. A number of private organizations collaborated with PCHRD in rewarding excellence in research. The Pharmaceutical HealthCare Association of the Philippines (PHAP) and Gruppo Medica, a Filipino-owned pharmaceutical company, through PCHRD, provided funds for undergraduate students' research on indigenous sources of medicine, particularly medicinal plants. PCHRD's association with PHAP dates back to 1984 when the latter gave the first PCHRD-PHAP award. The PCHRD-Gruppo Medica award, meanwhile, is now on its second year.

PCHRD kits up the kitty through partners for health

Faced with limited resources for unlimited R&D needs, PCHRD tapped the strength of its partners. In 1998, the Council generated locally nearly PhP6 million for research, incentives for researchers, scholarships, information technology development and use, and technology promotion. It sourced US\$6,000 from the Commission on Health Research for Development (COHRED) to fund the 1999 National Health S&T Congress. Meanwhile, the International Development Research Centre gave PhP8.92 million and UNESCO PhP600,000 to support the PCHRD-led project on the use of information and communication technology in selected *barangays* (villages) in the country.

PCHRD earned about a quarter of a million pesos from the sales of publications and HERDIN CD-ROM, online services, search requests, and photocopy services provided to members of the health research network.

THE PCHRD SECRETARIAT

At the core of the Council's commitment to health

At the heart of the Council's commitment to promote the Filipino's health through R&D is the PCHRD secretariat. This is composed of 39 technical and 26 non-technical personnel, with a male to female ratio of 10:24.

The PCHRD core staff combine their diverse qualifications and experiences to run the network of partners who generate knowledge and technologies for health. They continually update their knowledge in research management through advanced studies. In 1998, six staff pursued masters studies and one her doctorate studies. Fifteen of the staff hold masters and higher degrees.

PCHRD FINANCES

In 1998, PCHRD had a total government allotment of PhP37.7 million. This is a slight dip (4%) from the previous year's appropriation of PhP39.2 million. Funds from other sources amounting to PhP22.9 million supplemented PCHRD's coffers, giving a total of PhP60.6 million (Table 4).

Almost half (44%) of government's appropriation was used as grants-in-aid. A third (34%) went to operations. The rest

(22%) was allotted to general administration and support (Figure 4).

Of the grants-in-aid funds, a little more than half (55%) was spent on S&T education and training. A third (34%) supported research and development projects. The remaining 11 percent was used for technology delivery. (Figure 5).

Figure 4. PCHRD Resources, CY 1998

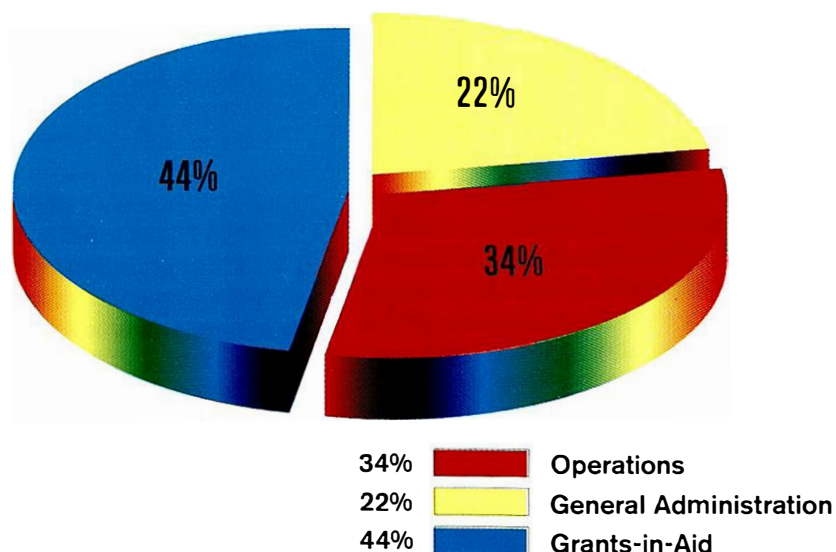
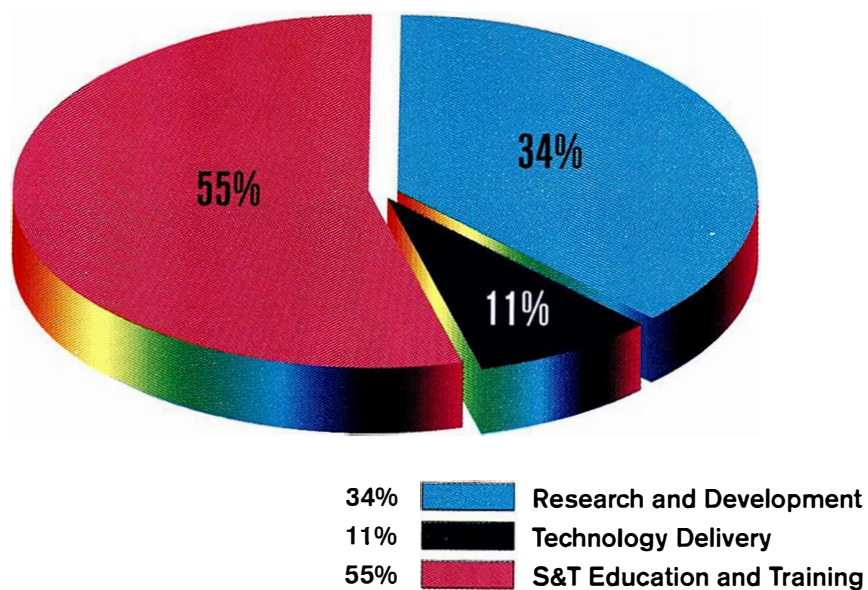


Figure 5. PCHRD Grants-in-aid, CY 1998**Table 4. PCHRD's financial profile, CY 1998**

	Allotment (PhP)	Expenditures (PhP)
General Appropriations from Government		
General administration and support	8,453,809	8,444,778
Operations	12,730,965	11,652,395
Grants-in-aid	16,521,500	16,185,205
Research and Development	5,647,465	5,632,029
Technology delivery	1,801,325	1,161,228
S&T education and training	9,072,710	9,391,948
TOTAL	37,706,274	36,282,378
Funds from other sources	22,917,963	8,338,115
GRAND TOTAL	60,624,236	44,620,493

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Secretary
Department of Science and Technology

Vice Chairman
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Secretary
Department of Health

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Philippine Society of Gastroenterology

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Pascual Laboratories, Inc.

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

Dr. Warlito C. Vicente
Dean
Davao Medical School Foundation

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Executive Director
National Nutrition Council

Dr. Perla Santos Ocampo
Chancellor
University of the Philippines Manila

Dr. Pacita L. Zara
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Philippine Council for Health Research and
Development

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Dr. Generoso F. Basa
Dr. Bonifacio C. Dazo
Dr. Adriano V. Laudico
Dr. Fernando S. Sanchez, Jr.
Dr. Victor C. Valenzuela
Dr. Pacita L. Zara

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Finance and Administrative Division

Dr. Alan B. Feranil
Research Management and
Development Division

Teresita O. Laguimun
Officer-in-Charge
Human Resources and Institution
Development Division

Merlita M. Opeña
Research Information, Communication,
and Utilization Division

ANNEX 1

Projects Assisted by PCHRD in 1998

Biomedical Devices

Prototype development of a continuous passive motion machine
Engr. Renato Nuguid (Phase 1)
Designs and Systems
Dr. Rafael Bundoc (Phase 2)
Philippine General Hospital
University of the Philippines Manila
Completed

Drug Development

Acute toxicity and behavioral studies in mahogany (*Swietenia mahoganii*) seed extract
Dr. Horacio Estrada
College of Medicine
University of the Philippines Manila
Ongoing

Mutagenicity potential of mahogany seed extract
Dr. Ramon Miranda
Institute of Chemistry
University of the Philippines Diliman
Ongoing

Sub-acute toxicity and efficacy studies (Hypoglycemic and anti-arthritis effects of mahogany seed extract)
Dr. Romeo Quijano
College of Medicine
University of the Philippines Manila
Ongoing

Pharmaceutical studies on mahogany seeds
Dr. Natividad de Castro
College of Pharmacy
University of the Philippines Manila
Ongoing

In vivo pharmacologic studies of mahogany seed preparations in mammals
Dr. Nelia Cortes Maramba
College of Medicine
University of the Philippines Manila
Ongoing

Pharmacologic/Toxicologic studies of Philippine medicinal plants
Dr. Horacio Estrada
College of Medicine
University of the Philippines Manila
Ongoing

Mutagenicity, clastogenicity, and anti-mutagenicity potential of drug preparations from Philippine medicinal plants
Dr. Ramon Miranda
Institute of Chemistry
University of the Philippines Diliman
Ongoing

Establishment of quality control bioassay standard procedures for medicinal plant constituents
Dr. Romeo Quijano
College of Medicine
University of the Philippines Manila
Ongoing

Dosage formulation from medicinal plant constituents
Dr. Natividad de Castro
College of Pharmacy
University of the Philippines Manila
Ongoing

Clinical screening and validation studies of medicinal plants used in traditional folk medicine in the Philippines
Dr. Nelia Cortes Maramba
College of Medicine
University of the Philippines Manila
Ongoing

Toxicity and stability studies on *atis* (*Annona squamosa*) repellent lotion
Prof. Ileana Cruz
College of Pharmacy
University of the Philippines Manila
Ongoing

Technological development of processes for the production of high enantiomeric excesses of (S)(G)-ibuprofen using physical methods
Dr. Forentino Sumera
Institute of Chemistry
University of the Philippines Diliman
Ongoing

Technological development of processes for the production of high enantiomeric excesses of (S)(G)-ibuprofen using chemical methods
Dr. Eva Marie Ratilla
Institute of Chemistry
University of the Philippines Diliman
Ongoing

Technological development of processes to produce (S)(G)-ibuprofen in high enantiomeric excesses from the racemate using functionalized polymers
Dr. Leonorina Cada
Institute of Chemistry
University of the Philippines Diliman
Ongoing

Kinetic resolution of ibuprofen using commercially available lipases and proteases
Dr. Milagros Peralta
Institute of Chemistry
University of the Philippines Los Baños
Ongoing

Kinetic resolution of ibuprofen using local plant and crustacean lipases
Dr. Milagros Peralta
Institute of Chemistry
University of the Philippines Los Baños
Ongoing

Kinetic resolution of ibuprofen using lipases and proteases from local microbial strains
Dr. Ma. Jamela Revilla
Institute of Chemistry
University of the Philippines Los Baños
Ongoing

Environmental and Occupational Health

Assessment of ambient air quality in Iligan City using standard and phytomonitoring methods
Prof. Jessica Lavina
Mindanao State University - Iligan Institute of Technology
Ongoing

Risk assessment of major industries located at the Subic Free Port Zone
Engr. Reynaldo Esguerra
Industrial Technology Development Institute
Department of Science and Technology
Ongoing

Somatic mutation in peripheral blood lymphocytes among Metro Manila residents: Indicator of exposure to environmental pollution
Ms. Ma. Teresa Nareza-Yulo
Philippine Nuclear Research Institute
Department of Science and Technology
Completed

Nutrition

Vitamin A fortification of coconut cooking oil
Dr. Lydia Marero
Food and Nutrition Research Institute
Department of Science and Technology
Completed

Vaccines and Other Biologicals

Development of cell lines from primary culture of human cancer tissues
Dr. Gloria Bernas
Research Center for the Natural Sciences
University of Santo Tomas
Ongoing

Dissection of the human immune response to *Schistosoma japonicum* infection in the Hu-PBL-SCID mouse model
Dr. Bernadette Ramirez
Institute of Sociobiomedical Research
University of the Philippines Manila
Ongoing

Communicable Diseases

Comparison of quadruple (2RHZE/4RH) versus triple (2RHZ/4RH) short-course treatment for tuberculosis in the Philippines: A multi-center study
Dr. Charles Yu
De La Salle University Health Sciences Campus
Ongoing

A study on patient compliance to tuberculosis treatment regimen
Dr. Ma. Sandra Tempongco
College of Public Health
University of the Philippines Manila
Ongoing

Clinical spectrum of hepatitis C virus infection in the Philippines: Molecular virological aspect
Dr. Mary Ann Lansang
Research Institute for Tropical Medicine
Ongoing

Open-labeled randomized controlled trial and economic evaluation of selected microbial regimens in the outpatient treatment of community-acquired pneumonia in adults
Dr. Mediadora Sanie
Philippine General Hospital
University of the Philippines
Ongoing

Types of yeasts and drug resistance of clinical isolates in the Philippines
Dr. Glenn Bulmer
Faculty of Medicine and Surgery
University of Santo Tomas
Completed

Degenerative and Metabolic Disorders

Cancer pain severity and treatment survey: A study proposal for the Philippines
Dr. Adriano Laudico
Surgical Oncology Society of the Philippines
Ongoing

The practice of cancer pain management among physicians in the Philippines
Dr. Adriano Laudico
Surgical Oncology Society of the Philippines
Completed

Cytogenic characterization of childhood leukemias in selected tertiary hospitals in Metro Manila
Dr. Ma. Luisa Enriquez
Research and Biotechnology Division
St. Luke's Medical Center
Ongoing

Gender/Policy Studies

Development of national consensus guidelines for the management of tuberculosis
Dr. Renato Dantes
Tuberculosis Council of the Philippines
College of Chest Physicians
Ongoing

Development of an interdisciplinary code of ethics in reproductive health research
Ms. Cristina Torres
College of Arts and Sciences
University of the Philippines Manila
Ongoing

Evaluation of the National Integrated Research Program on Medicinal Plants
Dr. Ophelia Mendoza
Institute for Training, Evaluation and Research
Completed

State-of-the-art: Occupational health
Dr. Arturo Pesigan
College of Public Health
University of the Philippines Manila
Ongoing

Towards a holistic and gender-balanced understanding of developmental concerns in the Philippines: A state-of-the-art review of women's health studies and action projects with focus on male participation
Dr. Romeo Lee
Social Development Research Center
De La Salle University
Completed

Projects Undertaken by Beginning Researchers Under the Biomedical Research Methods Training Program

Ongoing Projects National Capital Region

Adverse drug reactions to antipyretics, analgesics, anti-inflammatory agents, anti-asthmatics, and anti-convulsants among pediatric patients at the UERMMM emergency room

Dr. Ronaldo Macaraeg
University of the East Ramon Magsaysay Memorial Medical Center

Catalase peroxidase gene mutations in isoniazid-resistant *Mycobacterium tuberculosis* isolates

Ms. Miriam Marzan
College of Arts and Sciences
University of the Philippines Manila

Comparison of two transport systems for anaerobes from abscesses

Prof. Marorhen Tobias
College of Public Health
University of the Philippines Manila

Cresol as a possible alternative to glutaraldehyde as a sterilizing solution

Dr. Norman Garcia
Manila Central University Filemon D. Tanchoco Memorial Foundation

Cultured autologous keratinocytes for the treatment of skin ulcers

Dr. Arnelfa Paliza
University of Santo Tomas

Degree of immunohistochemical expression of cytokeratin B: Its relation to survival of patients with squamous cell carcinoma of the cervix

Dr. Ma. Lourdes Irao
Manila Central University Filemon D. Tanchoco Memorial Foundation

The accuracy of transcerebellar diameter/abdominal circumference ratio in abdominal fetal growth

Dr. Abigail Elsie Castro
Far Eastern University Nicanor Reyes Medical Foundation

The antimicrobial effect of leaf extracts of *Mimosa pudica* on *E. coli*, *S. typhi*, *Sh. dysenteriae*, *V. cholera*, *S. aureus*, and *Ps. aeruginosa*

Dr. Danilo Marella
Far Eastern University Nicanor Reyes Medical Foundation

Mycobacterium tuberculosis isolation by polymerase chain reaction

Mr. Jay Dalet
College of Arts and Sciences
University of the Philippines Manila

Waist-to-hip ratio index and hypertension among Filipino adults

Prof. Lucifino Firmo
College of Public Health
University of the Philippines Manila

Region 7

Study on the efficacy of *saluyot* (*Corchorus capsularis*) leaves decoction as a diuretic agent compared to furosemide given orally in rabbits

Dr. Fe-Acenas Cabugao
Southwestern University Matias Aznar Memorial College of Medicine

Completed Projects National Capital Region

A descriptive study on the knowledge, attitudes, and practices of Quezon City Dental Society private practitioners on dental waste management

Dr. Jesusa Santos
College of Dentistry
University of the Philippines Manila

The prevalence of chronic respiratory illnesses and reduced ventilatory function among garment workers exposed to cotton fiber

Dr. Sonny Matias Habacon
Far Eastern University Nicanor Reyes Medical Foundation

Region 7

The musculoskeletal manifestations and functional capacity of the 60 years and above of Dumaguete City

Dr. Ramonita Nakao
Silliman University

Projects Undertaken by Beginning Researchers Under the Regional Research Fund

Ongoing Projects Region 6

Beliefs, attitudes, and behavior of the Tagabawa Bagobos in

Sta. Cruz, Davao del Sur
Dr. Ebonia Sevaspe
University of the Philippines in the Visayas

Region 7

A comparative study of the antibacterial activity of *malunggay* (*Moringa oleifera*) plant parts versus cloxacillin on penicillin-resistant *Staphylococcus aureus*

Ms. Arlene Diaz
Southwestern University Matias Aznar Memorial College of Medicine

The prevalence of hearing impairment among schoolchildren at Cebu Central School

Dr. Arthur Dy
Vicente Sotto Memorial Medical Center

Region 8

Community-based approach in the control of schistosomiasis in newly discovered endemic areas

Ms. Daisy Perez
Regional Field Office No. 8
Department of Health

Disabilities among cerebral schistosomiasis patients before and after praziquantel treatment

Dr. Imelda Balonga
Schistosomiasis Training and Research Laboratory

Department of Health

Factors affecting iron deficiency anemia of first year high school students in Biliran National Agriculture School
Ms. Evan Tajo

Biliran National Agricultural School

Knowledge, attitudes, and practices on the use of pesticides
Ms. Lilibeth Miralles

Leyte State School of Agriculture

Risk factors to iodine deficiency among patients at City Health Office, Ormoc
Ms. Luz Calipayan

Ormoc City Health Office

Snail control using fungicide
Mr. Roger Hambre
Regional Field Office No. 8
Department of Health

The accuracy and reliability of rural health units microscopic laboratory team in the detection of malarial parasites
Ms. Thelma Lim

Remedios T. Romualdez Memorial Foundation

Region 11

Safety, efficacy, and quality studies on selected herbal medicinal products in Davao City
Ms. Eva San Juan
Immaculate Concepcion College

Screening for biological activities of some plants with biomedical importance
Dr. Agnes Togon
University of Southwestern Philippines

**Completed Project
Region 8**

Prevalence and incidence rate of pesticide poisoning among rice farmers in Region 8
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ANNEX 2**PCHRD Scholars
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PhD Maternal and Child Health and Nutrition
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[University of the Philippines Manila]

Gerlie de los Reyes*
PhD Pharmaceutics
University of Southern California
[University of the Philippines Manila]

Dr. Jaime Montoya*
PhD Pathology
University of London
[University of the Philippines Manila]

* Bases Conversion Fund Scholars

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[Zamboanga City Medical Center]

Dr. Ma. Liza Castro
Master of Public Health
College of Public Health
University of the Philippines Manila
[Department of Health]

Rosario Enano
Master of Public Health
College of Public Health
University of the Philippines Manila
[UP Philippine General Hospital]

New Scholars

Dr. Fidelita Dico
MSPH Microbiology
College of Public Health
University of the Philippines Manila
[Regional Health Office No.8, Department of Health]

Dr. Victor Ernesto Yusuico
MS Clinical Epidemiology
Institute of Clinical Epidemiology
University of the Philippines Manila
[UP College of Medicine]

Ernesto Gregorio, Jr.
Master of Public Health
College of Public Health
University of the Philippines Manila
[UP College of Public Health]

ANNEX 3

Thesis/Dissertation Grantees

Ongoing

1. Lydia Leonardo
 Sending Institution: UP College of Arts and Sciences
 Degree: Ph.D. Public Health (Parasitology) (1993)
 School: UP College of Public Health
 Title of dissertation: *Proteases of the Schistosoma japonicum* egg
2. Laurie Ramiro
 Sending Institution: UP College of Arts and Sciences
 Degree: Ph.D. Clinical Psychology (1993)
 School: UP
 Title of Dissertation: *Manginginom, tomador at lasenggo: A psychosocial study of alcoholism in the Philippines* (1994)
3. Dr. Mary Santos Regal
 Sending Institution: UST Faculty of Medicine and Surgery
 Degree: MS Clinical Epidemiology (1993)
 School: UP College of Medicine
 Title of Thesis: The influence of blood lead on the cognitive function of child scavengers in Smokey Mountain
4. Nancy Hilario
 Sending Institution: UST College of Pharmacy
 Degree: MS Chemistry (1993)
 School: University of Santo Tomas
 Title of Thesis: Phytochemical studies of three selected Apocynacea for biologically active constituents
5. Monico Tenedor
 Sending Institution: Lyceum of Aparri
 Degree: MS Chemistry (1994)
 School: University of Santo Tomas
 Title of Thesis: Isolation and structure of active constituents from *Corchorus capsularis* against *M. tuberculosis*
6. Erlinda Tan-Nuguid
 Sending Institution: UST College of Pharmacy
 Degree: MS Chemistry (1994)
 School: University of Santo Tomas
 Title of Thesis: Zinc, copper, and cadmium levels of Filipinos with coronary heart disease (CHD)
7. Nina Castillo Carandang
 Sending Institution: UP Clinical Epidemiology Unit
 Degree: Ph.D. Medical Anthropology (1995)
 School: University of Amsterdam, Netherlands
 Title of Dissertation: Household and community responses to perceived malaria in an endemic zone in rural Philippines
8. Grace Azares
 Sending Institution: UST Research Center for the Natural Sciences
 Degree: MS Pharmacy (1995)
 School: University of Santo Tomas
 Title of Thesis: Structural characterization of the alkaloids of *Pandanus dubius spreng*
9. Howell Ho
 Sending Institution: UP College of Arts and Sciences
 Degree: MS Biochemistry (1996)
 School: UP College of Medicine
 Title of Thesis: Modulation of telomerase activity by okadaic acid and genestein
10. Preciosa Corazon Pabroa
 Sending Institution: UP Natural Sciences Research Institute
 Degree: MS Chemistry (1996)
 School: UP Institute of Chemistry
 Title of Thesis: Purification and biochemical characterization of the venom from the jellyfish *Chiropsalmus quadrigatus*
11. Dr. Susan Y. Mabunga
 Sending Institution: UP College of Public Health
 Degree: MS Dentistry
 School: UP College of Dentistry
 Title of Thesis: Social impact of oral diseases and disorders among workers

12. Francisco Chung
 Sending Institution: Lung Center of the Philip
 pines
 Degree: MS Biochemistry (1996)
 School: UP College of Medicine
 Title of Thesis: P-glyco-protein in non-small
 cell lung cancer as a
 possible marker for antine
 oplastic drug resistance
13. Dr. Socorro Lupisan
 Sending Institution: Research Institute for
 Tropical Medicine
 Degree: MS Epidemiology (1996)
 School: UP Institute of Clinical
 Epidemiology
 Title of Thesis: Validity of the WHO-
 recommended ARI case
 assessment in the diagnosis
 of pneumonia in children less
 than five presenting cough
 and fever in a malaria
 hyperendemic area in the
 Philippines
14. Phoebe Espinas
 Sending Institution: National Museum
 Degree: MS Biological Sciences
 (1996)
 School: University of Santo Tomas
 Title of Thesis: Medicinal plants and home
 remedies of the Abellen Aetas
15. Jack Hess Baricuatro
 Sending Institution: University of San Carlos
 Degree: MS Chemistry (1996)
 School: University of San Carlos
 Title of Thesis: Isolation and characterization
 of insecticidal and antimicro
 bial metabolites of red alga
Gledsiella acerosa (Forskal)
 Feldman & Hamel
16. Diosdado Sale
 Sending Institution: University of San Carlos
 Degree: MS Chemistry (1996)
 School: University of San Carlos
 Title of Thesis: Isolation and characterization
 of bioactive metabolites of
 red alga *Halymenia*
durvellaei: Bory
17. Dr. Fe Esperanza Espino
 Sending Institution: Research Institute for
 Tropical Medicine
 Degree: PhD Tropical Medicine
 (1996)
 School: Queensland University,
 Australia
 Title of Dissertation: Indicators for evaluating the
 effect of a community-based
 malaria control intervention
 in a low endemic area in the
 Philippines
18. Dr. Sandra Torres
 Sending Institution: Philippine Orthopedic
 Institute
 Degree: MS Epidemiology (1996)
 School: UP Institute of Clinical
 Epidemiology
 Title of Thesis: Risk factors of hip fractures
 in Filipinos
19. Erna Arollado
 Sending Institution: UP Diliman Health Services
 Degree: MS Pharmacy (1997)
 School: UP College of Pharmacy
 Title of Thesis: Extraction and isolation of
 anti-inflammatory
 components from *Hibiscus*
rosasinensis
20. Dr. Xenia Tigno
 Sending Institution: UP College of Medicine
 Degree: MS Epidemiology (1997)
 School: UP Institute of Clinical
 Epidemiology
 Title of Thesis: Neurophysiologic evaluation
 of workers in an automotive
 body assembly
21. Rodmar Pulido
 Sending Institution: Lung Center of the Philip
 pines
 Degree: MS Biochemistry (1997)
 School: UP College of Medicine
 Title of Thesis: Modulation of vinblastine
 cytotoxicity by protein kinase
 inhibitor genistei, phos-
 phatase inhibitor, okadaic
 acid, and lectin from
 Dolichos Laboratory in non-
 small lung cancer cells

22. Donna Montañano
 Sending Institution: National Kidney and Transplant Institute
 Degree: MS Nutrition (1997)
 School: UP College of Home Economics
 Title of Thesis: Short-term effects of different sources of protein in early stages of chronic renal disease

23. Anacleto Agayosa
 Sending Institution: UP Diliman
 Degree: MS Biology (1997)
 School: UP Institute of Biology
 Title of Thesis: Lectins and lectin receptors from *Acanthamoeba* sp.

24. Jay Dalet
 Sending Institution: UP Manila
 Degree: MS Biochemistry (1997)
 School: UP College of Medicine
 Title of thesis: Direct detection of rifampicin resistance mutations in the rpoB gene of selected community-based and hospital-based Philippine *Mycobacterium tuberculosis* isolates

25. Rhodora Gonzales
 Sending Institution: University of Santo Tomas
 Degree: MS Pharmacy (1997)
 School: University of Santo Tomas
 Title of Thesis: In vitro assessment of anti-inflammatory compounds from Philippine medicinal plants

26. Raquel Tan
 Sending Institution: National Kidney and Transplant Institute
 Degree: MS Microbiology (1997)
 School: University of Santo Tomas
 Title of Thesis: Cell protecting effect of sublytic doses of streptolysin O on human proximal kidney tubule cells from cell-mediated cytotoxicity

27. Mildred Padilla
 Sending Institution: UP College of Veterinary Medicine
 Degree: Ph.D. Public Health Parasitology (1997)

School: UP College of Public Health
 Title of Dissertation: Development of an antigen detection assay for fasciolosis in cattle

Completed

1. Almira Judy Aguilar
 Sending Institution: University of San Carlos
 Degree: Master of Health Social Science
 School: De La Salle University, Manila
 Title of Thesis: A descriptive study of the prenatal services under the Privileged Mother's Services Program of a Metro Cebu hospital
2. Josephine Sarau
 Sending Institution: Bureau of Food and Drugs, Department of Health
 Degree: MS Pharmacy
 School: University of Santo Tomas
 Title of Thesis: Preliminary screening of cytotoxic activity of *Raphanus sativus* L. seeds and *Schefflera odorata* b. leaves and roots on different human-derived cancer cell lines
3. Mafel Ysrael
 Sending Institution: UST Research Center for the Natural Sciences
 Degree: Ph.D. Chemistry
 School: University of Santo Tomas
 Title of Dissertation: Chemical studies of the bioactive constituents of *Ipomoea muricata* Jacq. (Convolvulaceae)
4. Lolita Cavinta
 Sending Institution: UP College of Medicine
 Degree: MSPH Medical Microbiology
 School: UP College of Public Health
 Title of Thesis: Antibodies to hepatitis C virus major antigens associated with certain stages of hepatitis C virus infection

5. Ma. Elena Manansala
 Sending Institution: UST College of Pharmacy
 Degree: MS Pharmacy
 School: UST
 Title of Thesis: Studies on the hypoglycemic property of *Ficus pseudopalma* Blco. (Moraceae) and *Phyllanthus niruri* Linn. (Convolvulaceae)

6. Nonita Peteros
 Sending Institution: MSU-IIT Chemistry
 Degree: MS Chemistry
 School: MSU Iligan Institute of Technology
 Title of Thesis: Isolation and partial characterization of the components from a bioactive fraction of *Anona muricata* Linn. leaves

7. Robelita Negradas
 Sending Institution: UP Manila School of Health Sciences (Palo, Leyte)
 Degree: MS Nursing
 School: UP College of Nursing
 Title of Thesis: The effects of humor on the level of anxiety of uterine cancer patients undergoing hysterectomy

New

1. Dr. Crisol Tabarejo
 Sending Institution: Southwestern University
 Matias Aznar Memorial College of Medicine
 Degree: MSPH
 School: UP College of Public Health
 Title of Thesis: The relationship of selected maternal exposures and the delivery of low birthweight infants

2. Irma Gavino
 Sending Institution: UST College of Nursing
 Degree: Ph.D. Nursing
 School: UP College of Nursing
 Title of Dissertation: Towards enhancement of self-esteem for Filipino abused women

ANNE

Research Fellow Ongoing

1. Dr. Evelina
Laguarda

Institution:

Host Scientists:

Title

Project

:

2. Prof. Rosario
Rubite Sending

Institution:

Host

Title of

Project

:

3. Cristina
Ransing

Institution

Host

Title of

Project

:

4. Jose
Bergsund

Institution:

Host Scientist:

Title of Project:

UST College of Medicine

Dr. Gloria Bernas

Dr. Priscilla Caguioa

Positivity of BCR-AVL
gene in the peripheral
blood and bone marrow
aspirates among patients
with CML

UP College of Arts and
Sciences

Dr. Bernadette Ramirez
Strain complex of *Schisto-
soma japonicum* in the
Philippines

UST Research Center for
the Natural Sciences

Dr. Gloria Bernas Saponins
as booster of the immune
system

UST College of Science

Dr. Fortunato Sevilla III
Development of an
optical fiber fluorescence
tissue biosensor for
determination of paralytic
shellfish poisoning (PSP)
toxins in shellfish extracts

Completed

1. Dr.

Ransing

Institution

Host

Scientists

:

Title

Project

:

2. Dr. Elaine

Galang

Institution:

Host Scientists:

Title

Project

:

National Poisons

Control and

Information Services

Makalina Dr.

Nelia Maramba Dr.

The role of detoxification in
the treatment of
methamphetamine-induced psychosis

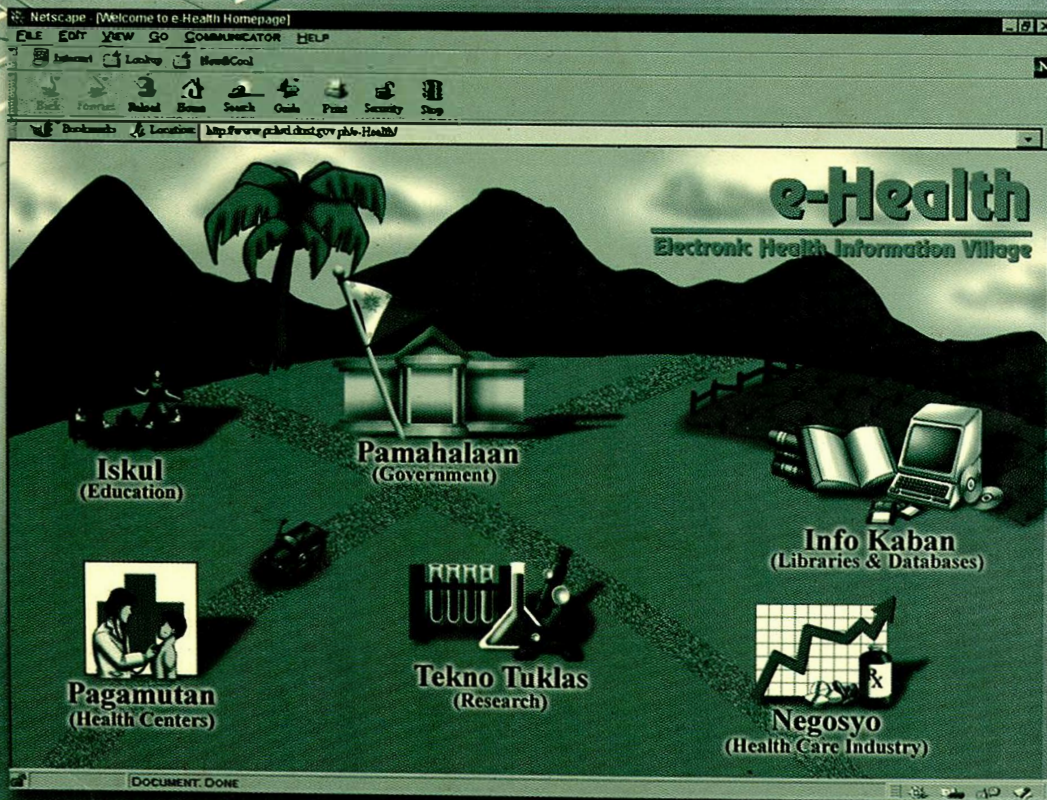
UP College of Medicine

Dr. Cleotilde How

Dr. Marissa Lukban

Dr. A. Salonga

CSF and serum rifampicin
level analysis in children
with TB meningitis using
high performance liquid
chromatography



PHILIPPINE COUNCIL FOR HEALTH RESEARCH AND DEVELOPMENT
Department of Science and Technology