

**39TH MEETING OF THE ADVISORY COMMITTEE ON HEALTH RESEARCH  
(ACHR)**

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Santiago, Chile, 7–9 November 2005

*Report to the Director*

**Pan American Health Organization  
2005**

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# **Report of the 39th Meeting of the Advisory Committee on Health Research of PAHO/WHO, held in Santiago, Chile from 7 to 9 November 2005**

## **Introduction**

The Secretariat of the Advisory Committee on Health Research (ACHR) convened the 39th Meeting of the Committee by request of the Director of the Pan American Health Organization (PAHO/WHO) in order to review the role of the Committee and discuss its direction, the importance of its continued operation, and its functioning. These topics were considered in light of a series of developments, notably the appointment of a new Secretary of the Committee.

Since its creation in 1932, the ACHR has functioned under different arrangements and has made various contributions. Among other things, it has helped to formulate policies and strategies for cooperation on research within PAHO and has reviewed research activities in which the Organization has participated. For most of its existence the Committee met every two years, but during the last decade the meetings have been held annually. The Committee consists of 15 recognized scientists of the Region.

In light of the recommendations made at the last meeting, the needs expressed by the Director, the availability of new electronic communication technologies, and previous experiences, the new Secretary has proposed establishing a “live” committee, with regular deliberations and continuous open communication. Such a committee would discuss current problems in health research and generate recommendations on an ongoing basis, but would also meet in person from time to time in order to review its operation and engage in strategic planning. In addition to functioning dynamically, this committee should be representative, with members drawn from countries of the Region with varied levels of development in health research and from different disciplines and areas of knowledge. The committee should submit proposals that are linked to the strategic activities and orientations of the Organization.

The meeting agenda called for discussion of proposals that reflected these considerations. The objectives of the meeting were to:

- Review the mission and vision of the ACHR, its structure, and its operation
- Consider how to integrate the discussions and activities of the ACHR with research activities in the countries, and with the needs of the Director and of the Research Promotion and Development Unit of PAHO
- Agree on mechanisms for feedback and evaluation of the ACHR’s activities
- Recommend an agenda for the next two years
- Propose forms of interaction between the ACHR, the PAHO Internal Advisory Committee on Research, and the WHO Advisory Committee on Health Research. The members of the ACHR should get to know these colleagues and should share information and knowledge, creating a permanent forum.

This report summarizes the presentations and observations made during the 39th Meeting of the Advisory Committee on Health Research of PAHO/WHO, as well as the recommendations drawn up in the final session of the meeting.

## **1. Presentations**

### **1.1 Opening Session**

#### **1.1.2 Remarks by Dr. Mirta Roses Periago, Director of the Pan American Health Organization (PAHO/WHO)**

Dr. Roses expressed thanks for the invitation to address the ACHR, for the generous assistance provided in organizing the event in Chile, and for the enthusiastic and committed response by the participants. She stated that health research is being carried out in a global context of rapid changes, and she described the crises currently facing the countries of the Region, noting that responses to these crises have often been good. She highlighted the opportunity to learn more during the meeting about advances in research in Chile aimed at improving public health.

Dr. Roses noted that the meeting had brought together members of the ACHR with PAHO staff and frontline researchers. She said that she hoped to receive recommendations for transforming the Committee into a live forum that will discuss ideas that can help the Organization respond to the needs of populations with high-quality research, innovative strategies, and developments that strengthen its leadership and scientific capacity.

She called attention to certain important developments within the Organization that should be considered in relation to technical cooperation in research. These include formulation of the Organization's strategic plan, which identifies specific problems and monitoring strategies; the development of a methodology for evaluation of the Essential Public Health Functions, approved by the Governing Bodies of PAHO; and the formal establishment of a budget policy for programs that covers the subregional, regional, and national levels, recognizes the needs of specialties, and has an impact on the work of international networks.

The Director recalled the two broad priorities of PAHO:

- The unfinished agenda. This has a strong ethical dimension: although the necessary knowledge, technologies, and resources are available, countries and population groups still suffer from health problems that should have been overcome a long time ago.
- The protection of gains already made. The notion that progress in improving health and development is inexorable is negated by facts showing that it is indeed possible to lose ground already won.

She mentioned the limitations of certain criteria, such as the "burden of disease," that are not very useful in setting collective agendas. Despite the efforts of the countries, some have experienced slippage in their levels of health. The Director emphasized the growing need to work with solid scientific evidence and to bridge the gap between the generation of knowledge and the use of this knowledge in formulating health policies. The latter point is

especially important for technical cooperation in health research and was among the critical issues raised at the Ministerial Summit on Health Research held in Mexico in 2004.

Dr. Roses called on the Committee to give special attention to the following:

- The high priority of health on the international agenda and the importance of research as a factor linked to the wealth of human resources.
- The need for PAHO to establish ties between health investigators and health administrators with a view to, among other things, identifying appropriate ways and formats for “packaging” knowledge and information so that they can be used.
- PAHO’s capacity for convening and integrating.
- The steering role that the ministries of health should exercise with regard to research.

Finally, Dr. Roses invited the Committee to make recommendations regarding the orientation of the ACHR’s work and ways of continuing the Committee as a live forum that brings its members together for periodic meetings complemented by ongoing virtual exchange.

#### **1.1.2 Remarks by Dr. Víctor Penchaszadeh, Chairman of the Advisory Committee on Health Research of PAHO/WHO**

Dr. Penchaszadeh noted the special circumstances of this meeting of the ACHR: the Committee has not met since 2004, and there currently exist several vacancies on the Committee. Only three members of the ACHR are participating in this 39th Meeting in Chile. He recognized the need to transform the Committee to take advantage of new forms of cooperation and communication and in accordance with the new management of the Research Promotion and Development Unit of PAHO.

The Chairman called for the meeting to achieve its proposed objectives by reviewing the mission and vision of the ACHR, as well as its structure and operation, and recommending a work agenda for the next two years. He asked the participants to think about the best forms of collaboration among the different entities that would allow the ACHR, as an advisory group, to help meet the targets set by PAHO.

He acknowledged the legacy left by the previous chairmanship of the ACHR, that of Dr. Jorge Allende. He also highlighted the recommendations made by the Committee’s last meeting, which called for strengthening communication within PAHO and for ensuring adequate budgetary support for the Committee’s initiatives so that projects and cooperation among scientific institutions, with other institutions, and within PAHO can move forward, and horizontal cooperation within the Organization can be achieved.

Dr. Penchaszadeh emphasized the need for health research in the Region to specifically address inequities in health, the social determinants of disease, health policies, and the operation of the health systems. The knowledge generated by health research should be applied immediately for the promotion and protection of the population’s health. He stated

that resources for research are concentrated in the more developed countries, which devote the vast bulk of their research financing to meeting the needs of their more affluent populations and only a very minor proportion to addressing the health problems of the developing countries (approximately 90% and 10% respectively). The countries of the Region should increase their research budgets and use these resources to determine how best to confront the diseases most prevalent in those countries and how to reduce inequities in health.

The Chairman concluded by affirming that PAHO has many opportunities to promote research that can improve health conditions and, in particular, to tackle the challenge of reducing the gap between the countries that generate knowledge and other countries that not only do not generate it but also remain outside the benefits of its application.

### **1.1.3 Remarks by Dr. Pedro García Aspillaga, Minister of Health of Chile**

The Minister expressed his thanks for the invitation and welcomed participants to the meeting, especially the Director of PAHO/WHO and the opening speakers. He expressed satisfaction that PAHO had accepted the invitation to hold the meeting in Chile. Dr. García went on to urge the participants to deliver new ideas to the Director in their capacity as an advisory council, and to keep in mind the role of the ACHR and the expectations of society that action will lead to positive changes. He noted that the development of research is currently neither equitable nor uniform among the various countries, and urged that steps be taken to address that problem without necessarily replicating the experiences of the developed countries. He emphasized that studies on the determinants of health provide a necessary foundation for addressing the problems that afflict the population.

### **1.1.4 Presentation of the Meeting Agenda by Dr. Luis Gabriel Cuervo, Secretary of the ACHR and Chief of the Research Promotion and Development Unit of PAHO/WHO**

Dr. Cuervo reviewed the agenda for the meeting, which takes into account his recent arrival in the Unit as well as the recommendations made at the previous meeting. The agenda has three main parts:

- A panel on health research agendas in the Region of the Americas and on mechanisms for financing this research
- Discussion of trends in production of scientific research on health in Latin America and the Caribbean and on patterns of collaboration between countries of the Region and the rest of the world; discussion of foundations for a PAHO research policy and of the roles of the Secretariat, the Research Promotion and Development Unit, and the ACHR.
- A panel dedicated to sharing and discussing Chile's experiences in health research.

Dr. Cuervo mentioned certain changes that favor the accomplishment of the ACHR's new task. These include the availability of tools to synthesize scientific evidence using replicable and transparent parameters, and new technologies and methodological developments in areas such as biostatistics, the social sciences, and the systematic integration of scientific evidence into health decision making.

## **1.2 Panel Presentations on Agendas and Financing Mechanisms for Health Research in the Region of the Americas**

### **1.2.1 Presentation by Dr. Juan Carlos O'Donell, Ministry of Health and Environment of Argentina**

Dr. O'Donell described the model for organization and management of research within the Ministry of Health and Environment and its integration with other areas. Among the agencies that carry out health research are the National Commission on Health Research Programs (CONAPRIS), which administers the Ramón Carrillo–Arturo Oñativia research fellowships; the VIGIA or “watchman” program; and the National Administration of Drugs, Food, and Medical Technology (ANMAT). He outlined the creation of CONAPRIS, which will integrate the research activities of the Ministry, including the granting of fellowships for basic and clinical research in hospitals and health programs, with institutional support provided especially to university institutions, scientific societies, and nongovernmental organizations that specialize in public health.

The speaker emphasized the importance of the multicenter studies focusing on topics approved by Ministerial Resolution No. 1221/04. These topics include drug policies; implementation and evaluation of primary health care programs; epidemiological studies on endemic, chronic, noncommunicable diseases and/or their risk factors; research on health systems and services; management of hospitals and health services; health promotion and education; the relationship between health and environment; evaluations of economic and social factors in emerging and re-emerging diseases; and, finally, the investigation, development, and implementation of innovative solutions in public health.

Information about research projects and investigators has been used to construct a database. This was an important project for the Ministry because it identified human resources and research on the most important health topics, including research and researchers identified by the provincial ministries of health. These data can later be included in the general information of CONICET (CYCITAR). The database can be accessed on the Ministry's website at [www.msal.gov.ar](http://www.msal.gov.ar) (select “Salud Investiga Base de Datos – CONAPRIS”).

The speaker noted that research overseen by the Ministry has a number of strengths. They include the tendency to be interdisciplinary, an openness to social research, the ability to inform health policy making, the incorporation of clinical and social investigators, and promotion of participation by all the country's provinces as well as the city of Buenos Aires. There are, at the same time, various weaknesses, including the lack of an adequate support structure (the program functions with only two technical assistants—a social investigator and a clinical investigator, both part-time); the lack of a concrete program for evaluating results that would make it possible to measure impact; and the need for a larger research budget.

Current challenges include the creation of a database of investigators and the publication of research findings (see the Salud Investiga website at <http://saludinvestiga.msal.gov.ar>).

Dr. O'Donell concluded by underscoring the importance of the health research carried out under the Ministry of Health and Environment of Argentina. Research is seen as a means for

generating and bringing together knowledge in different domains, and as a tool for addressing problems and setting health policies. Finally, research programs contribute to an efficient development of human resources through the education of young professionals and the promotion of an interdisciplinary approach to their training.

### **1.2.2 Presentation by Dr. Suzanne Jacob Serruya, Ministry of Health of Brazil**

Dr. Serruya stated that there is consensus in Brazil that health policy research has been neglected and that change is needed. Despite the establishment of the Unified Health System in 2003 and the actions taken since then to strengthen health reform, it is important to recognize that over the last 50 years the management of science and technology in Brazil has been split between two levels. At the federal government level, three ministries are involved: the Ministry of Science and Technology, the Ministry of Education, and the Ministry of Health. At the state level, the main actors are the Secretariats of Science and Technology and the Research Support Foundations, which carry out actions related to research but not to health.

There are currently nearly 5,000 groups in Brazil conducting health research with the help of approximately 20,000 investigators, 11,000 of whom have the title of doctor. This represents 30% of the overall research effort in Brazil, and is the principal scientific-technological activity of the country. Nearly 50% of health research is undertaken by groups linked to the health sciences, 25% by groups in the biological sciences, and the remaining 25% by groups in other major domains of knowledge.

The regional distribution of investments in fellowships and in promotion of research shows a concentration in the Southeast region, which has the highest level of economic and social development in Brazil. This illustrates an inequality that has disturbing implications for Brazilian society.

In response to an international initiative led by the Global Forum for Health Research to track the flow of financial resources in health research, Brazil financed a study coordinated by its Ministry of Health that showed that total investment in health science and technology was \$1.719 billion between 2000 and 2002, with an annual average of \$573 million. The majority of these investments (73%) came from public funds, mostly at the federal level. However, the participation of the Ministry of Health was small, amounting to just \$32 million per year.

The first challenge was to build bridges between the different social actors in order to arrive at points of consensus on technical-political issues, an effort that culminated in the Second National Conference on Science, Technology, and Innovation in Health. This conference for the first time brought together the National Health Council with the three relevant ministries of Health, Science and Technology, and Education. During the course of the conference two important tools were created: the National Policy on Science, Technology, and Innovation in Health, and the National Priority Agenda for Health Research.

The generation of scientific and technological knowledge in the health sector involves highly complex processes. A policy on health research thus should consider every link in the



knowledge production chain, from research concerned exclusively with the advancement of knowledge all the way to operations research. Similarly, the policy should cover the majority of actors involved in research activities in the country, including those who carry out public health research as well as biomedical, clinical, and social research.

Finally, the policy should be oriented to setting priorities. In this regard, the most pressing need is to construct a priority agenda for health research. Historically, one of the principal characteristics of the Brazilian system for research promotion has been its low selectivity, reflecting an insufficient capacity to set and follow priorities. In order to develop a more selective policy in an environment of greater rationality, geared toward serving the country's interests, research needs must be ranked according to an established set of priorities. The priority research agenda should govern the use of all resources provided by the Ministry of Health for scientific and technological research. Two different promotion mechanisms are envisioned. The first is universal, providing for national research convocations, but maintaining the regional concentration of resources. The second seeks to strengthen the states by enabling them to hold their own convocations for priority investigations that address local problems and to carry out activities to build local capacity in the management of science and technology through the Research Support Foundations.

Unquestionably, the field that presents the greatest challenges is that of medicines and pharmaceuticals, where the process of concentration and redivision of the world market is most advanced. As a consequence of the trade liberalization in Brazil during the 1990s, the country lost ground on some of the technological advances it had achieved. Unlike the manufacture of medicines, the production of vaccines and serums is predominantly a public enterprise. As a result, the latter is more amenable to the establishment of a centralized technological policy based on national needs.

Dr. Serruya concluded her presentation by sharing the lessons learned in Brazil. The effective definition of health research priorities depends on:

- 1) Their technical soundness, which in turn reflects the capability to identify gaps in scientific and technological knowledge and to develop existing knowledge that can have an impact on health status.
- 2) Achieving political consensus, with support from investigators, health industry representatives, policy makers, health professionals, and users.
- 3) Their dynamism, that is, the capacity to modify the priorities in response to changes in the health situation and advances in the scientific and technological knowledge on which the determination of priorities was based.

### **1.2.3 Presentation by Dr. Fernando de la Hoz, Chief of the National Program on Health Science and Technology, COLCIENCIAS, Colombia**

Dr. de la Hoz began his presentation by thanking the Research Unit at PAHO for providing an opportunity to discuss issues related to the management of health research. He then described the structure of the National Council on Science and Technology, the national directorate, whose technical and administrative secretariat is COLCIENCIAS. Its purposes include securing support for international cooperation in science and technology and

innovation, strengthening regional capacity, training human resources, and developing a national strategy of innovation.

Funding for the National Program on Health Science and Technology is provided under Law 643 of 2001. Until 1997, the country's policy on health research did not focus on setting priorities. A decision was therefore made to have the research agenda for 1999–2004 concentrate on resolving four key problems that have affected the development of research in Colombia. For each problem, corresponding strategies and goals were defined, as follows:

- 1) Unequal development of research and imbalance among the different modalities of knowledge. The strategy that was adopted consisted of allocating research investments for 2000–2003 using a funding formula weighted according to the burden of disease. There were few advances in building consensus around strategic goals and in creating strategies to address local problems. In Colombia, research projects and resources are concentrated in the region of Antioquia, and there is a correlation between the health services in a particular area and the quantity of research that is funded. The pattern is to concentrate the most highly skilled and graduate investigators in certain areas rather than distributing them throughout the country.
- 2) Low representativeness in the scientific investigator community. Activities were financed to promote development of human resources and health research groups, supporting strategic programs for scientific and technological development with workshops, courses, and small research projects. Dr. de la Hoz provided data on scientific output in Colombia in 1993–2003: 1,483 articles in MEDLINE and 2,418 in LILACS, with an annual average of 60.8 in 1993–1998 and 64.8 in 1999–2003. There was a general increase in production in the biomedical area, as measured in MEDLINE and LILACS.
- 3) Predominance of individual production rather than production associated with projects. The speaker described advances in disseminating the activities of the National Program on Health Science and Technology through bulletins and lectures, and linkages made with the sector carrying out scientific development activities.
- 4) Marked differentiation in the distribution of scientific potential among regions. Dr. de la Hoz listed indicators of groups that guide development in areas of mastery toward areas identified as weak or needy in Colombia.

With respect to the various public health priorities, the distribution of financing by area is as follows: communicable diseases 47.0%; noncommunicable diseases 38.0%; mental health 4.3%; maternal health 3.2%; oral health 2.0%; injuries 1.9%; environment 1.7%; nutrition 1.7%; health systems and policies, 11.1%.

Following are the basic policy guidelines for COLCIENCIAS, with their indicators in parentheses: generate new institutional arrangements (origin of new resources in the National Science and Technology System); promote sustainable investment (creation of new funds, especially to support basic research); increase trained human resources in science and technology (number of new doctors, classified by area of research and by region); make

science and technology an integral part of national culture (survey on public perceptions of science and technology); work with the corporate sector to promote technological innovation and development for competitiveness (number of projects financed by industries); strengthen the country's research capability so that its output is competitive internationally (number of publications in international forums and number of research networks with international participation); reposition science, technology, and innovation as key activities for regional development (volume of resources allocated by departments to financing projects).

Goals not yet reached: definition of an agenda of priority research areas; strengthening of regional research in strategic areas.

The challenges for COLCIENCIAS under the strategic plan for 2005–2010 include promotion of networking among research groups and promotion of interdisciplinary collaboration, as well as efforts to ensure that the results of research are translated into public policies and actions to benefit communities.

Dr. de la Hoz reported that COLCIENCIAS is working to develop health research in four domains: diseases and conditions, proximal determinants and risk factors, development of methodologies for setting priorities, and policies concerning cross-cutting issues that affect both health and health research.

Finally, he said that there are no specific data regarding research on public policies in health, although the need is discussed continually. One of the reasons may be that there are few "category A" investigators who designate their area of focus as public health, in terms of either collective action or policy making. Nor does there exist in Colombia a clear mechanism for discussing the results of such research. In January 2006 COLCIENCIAS will organize a workshop with the Ministry of Health that presents the findings to date with a view to shaping public health policies.

#### **1.2.4 Presentation by Dr. Luis Tascan, Chief of the Office of Research and Technology Development of the Ministry of Health of Costa Rica**

Dr. Tascan began by emphasizing the declining level of resources available in his country. He said there is agreement that the Costa Rican health research system includes universities, research institutes, the private sector, and the Social Security Fund, and that the Ministry of Health should exercise the steering role in regard to research. Toward this end, in March 2005 the Office of Research and Technology Development was created to lead, direct, monitor, and strengthen the knowledge production efforts of the different groups involved in research, promotion, and technology assessment to meet priority needs in health, thus helping the Ministry carry out its steering role in the public and private arenas.

The National Agenda for Research and Technology Development was drawn up in consultation with the scientific community and health authorities, and was completed in 2004. This agenda defines the priority areas and topics for research and outlines strategies for promoting research to meet these needs. It is the key reference document that guides the actions of the institutions that make up the National Health Research System.

Furthermore, almost four years ago an executive decree ordered the National Health Research Council (CONIS) to carry out a systematic review of research protocols with respect to their bioethical and technical aspects. This was to be done through seven Committees on Scientific Ethics located in the principal research institutions of the National Health Research System, such as the Costa Rican Social Security Fund, the research institutes, the universities, and institutions of the private sector.

The main challenges are to identify sustainable sources of financing and to build bridges between the institutions that conduct research and those that use the knowledge generated. Another challenge is to achieve universal recognition of the Ministry of Health as the steering body in health research.

### **1.2.5 Virtual presentation by Dr. Charles Shields, Canadian Institutes of Health Research (CIHR)**

Dr. Shields first described the organization of CIHR and the different institutes in Canada that come under its umbrella. Research priorities are defined in CIHR's strategic plan ("the Blueprint"), which combines the strategic plans and priorities of the individual institutes. Health research in Canada encompasses four areas: biomedical; clinical; health systems and services; and population and public health.

CIHR takes a problem-based and multidisciplinary approach to health research. It focuses on making connections between knowledge and action, and on thinking strategically.

CIHR responds to the priorities established in its own five-year strategic plan and in the strategic plans of each institute. But it is also prepared to respond to unforeseen situations, such as the spread of SARS, through fast and efficient consultations.

Dr. Shields mentioned as challenges the decline in the success rate for open competitions (approximately 21%) and transitions within the institutes that have brought changes in scientific direction. He also highlighted the need to simplify processes, to strengthen the application of health research to health policy, and to increase the commercialization and economic benefits of research.

The ResearchNet Web portal facilitates online administration of research funding and provides an opportunity for collaboration among CIHR's institutes and other Canadian donors. The portal includes curricula vitae of investigators, with their work areas.

The third point is the establishment of partnerships with health charities, with industry, and with research bodies at the provincial level.

Finally, the speaker mentioned the international talent-building strategy that tries to develop international connections for investigators so that they will be more successful. In the area of global health, CIHR has an initiative that awards grants in partnership with the Bill & Melinda Gates Foundation. Other efforts are in the area of public safety and security.

Challenges: Dr. Shields called for efforts to develop simple and consistent processes, to maintain the grants programs, to develop and guide associations, to strengthen the Global

Health Research Initiative, and to conduct external reviews with public dissemination of the results.

### **1.2.6 Presentation by Dr. Donald Simeon, Caribbean Health Research Council (CHRC), Trinidad and Tobago**

Dr. Simeon presented the background of the CHRC, its priorities and challenges, and its work in the area of monitoring and evaluation. Its mission is to support, facilitate, and coordinate health research in the Caribbean and help disseminate the findings, and to advise and collaborate with Caribbean governments and other stakeholders on health research matters. The CHRC was established in 1955 as the Standing Advisory Committee for Medical Research in the Caribbean and was subsequently known as the CCMRC (1972–1998).

The Council serves 18 member countries, most of which are small and have low levels of financing for health research. However, they have a rich history of research on subjects such as anemia, metabolism, and child development. As its core functions, the Council advises governments and institutions in charge of promoting and authorizing original research, facilitates sharing and application of research findings, and sets standards to strengthen research capacity.

One of the challenges mentioned by Dr. Simeon is the small size of the member countries, whose populations range from less than 10,000 up to 2.6 million. Their economies are fragile and dependent on tourism. The majority of the countries lack a critical mass of investigators. Given the underfinancing of the research sector, investigators lack basic resources needed to carry out their work, and there is a persistent “brain drain” of human talent from the region.

The member countries also suffer from serious deficiencies in the transfer of relevant knowledge that would make it possible to use robust evidence in formulating public policy. The Caribbean Regional Health Policy and Health Systems Research Network (RENPHER) was created to develop policies for research on health services and to improve the translation of research into policy, building bridges between investigators and policy makers.

### **1.2.7 Presentation by Dr. Cecilia Villavicencio, Vice Minister of Public Health, Undersecretary of Public Health, Chile, on Chile’s Health Research Agenda and Health Objectives for the Decade 2000–2010**

Dr. Villavicencio described the changes in the health system and the development of institutions for health research. She then spoke about the National Fund for Health Research and Development (FONIS), which seeks to support achievement of the health objectives set for the decade and to promote the principle of evidence-based decision making.

At the Ministerial Summit on Health Research held in Mexico in 2004, Dr. Lee Jong-Wook, Director-General of WHO, asked, “Why is the world so vulnerable to health problems science is supposed to be able to solve?” He offered two possible reasons. The first is the historical weakness of the health systems, which have difficulty in delivering interventions of

proven effectiveness to the populations that need them. The second is the failure to base public policies on existing knowledge.

Dr. Villavicencio also referred to the information cycle described by Dr. Fiona Godlee and her colleagues in a 2004 article in *Lancet* (364: 295–300). Four key components of this cycle are the identification of gaps in biomedical knowledge, a synthesis of relevant knowledge, localization of the knowledge, and identification of new needs.

The speaker emphasized the importance of using an evidence-based approach that includes situation analysis, assessment of the burden of disease (ideally a quantitative measurement using only one indicator), evaluation of the efficacy and effectiveness of interventions, and economic evaluation. In Chile, the burden of disease and the efficacy and effectiveness of interventions were considered, and health objectives and interventions were proposed within the framework of the reform. The national health objectives and health goals that were identified for the year 2010 reflect priorities emerging from this analysis of the country's health problems and available interventions.

FONIS was founded in order to direct resources to applied health research that supports these health objectives. It receives financing from the Ministry of Health and the National Commission for Scientific and Technological Research (CONICYT) in equal measure. In 2004, the fund received applications for 700 projects, of which 40 were selected. In 2005 another 600 applications were tendered. The convocation is currently open to all and the distribution of grants depends on the applications submitted by the scientific community; there is no a priori selection of specific areas to be covered. Some indicators of cost effectiveness are available, but none that relate to the utilization and impact of the results of research financed by FONIS.

### **1.2.8 Deliberations and Recommendations on Agendas and Financing for Health Research in the Region of the Americas**

Following are some of the key points that arose during discussion of the presentations.

- a) It is important to take an interdisciplinary and intersectoral approach to research.
- b) The presentations from Costa Rica, Colombia, Chile, Trinidad and Tobago, Canada, and Brazil illustrated various ways of setting priorities systematically. They also described a series of alternatives for financing research that aims to solve health problems of importance to the countries. It was pointed out that national research agendas do not always reflect local priorities. Thus it is important to recognize specific needs while still maintaining coherence with national research policies and interacting with PAHO concerning support for particular research topics.
- c) Steps should be taken to promote a “culture of research,” encouraging research that has an impact on society and whose results benefit end users or entire populations. The assessment of research results should include, among other things, the application of findings to the decision-making and policy-making process, as well as measures of impact on health.
- d) Financial resources coming from the private sector are insufficient. The private sector's interest is usually limited to certain areas of research, basically those that

- promise an economic benefit to investors. This is a problem in light of the ethical, social, and cost-effectiveness criteria that should be applied to research, but that are not always fulfilled in the Region.
- e) Finally, attention should be given to human resources—their development, evaluation, motivation, specialization, remuneration, etc.

### **1.3 Presentation by Dr. Guillermo Paraje on Scientific Output in the Region of the Americas, 1992–2001**

Dr. Paraje began by explaining methodological aspects of the study. First, health research was broadly defined to encompass research in seven areas: clinical medicine, the biomedical sciences, basic sciences, pharmacology, food sciences, social sciences and social welfare, and public health. Second, the database used for the study is the one compiled by Thomson ISI, with three of its products: the Science Citation Index, the Social Sciences Citation Index, and the Arts & Humanities Citation Index. Only peer-reviewed articles, notes, and reviews were considered. These publications had to appear in regularly issued scientific journals that have a high impact factor (that is, the articles in them receive, on average, a high number of citations). This database has limitations: for one, it does not include conference presentations, posters, and so forth. Furthermore, the database is “biased,” favoring publications in English from Anglo-Saxon countries. However, it does provide the affiliations of all authors of the publications, as well as bibliographic references to the publications, making it possible to analyze the number of citations within the same database. It should be noted that while the Thomson ISI database yields information on the institutional affiliations of all the authors, there is no way to know the real contribution of each author. Nor is it possible to assign an ad hoc contribution structure, as the institutional affiliations are not linked to each author. Therefore the study presumed that all authors contribute in equal measure.

The speaker presented the results of data analysis for the Region of the Americas in the international context. He outlined patterns of collaboration between countries inside and outside the Region and broke down these patterns by income bracket. He defined what is meant by the “visibility” of scientific output, and discussed the production of scientific articles in the area of public health in the Americas.

#### ***Conclusions***

The first conclusion was that scientific output in the Region of the Americas experienced moderate growth, below the global rate of growth, during the period 1992–2001.

While global production of health knowledge grew at an average annual rate of 1.75%, the production of the Americas grew at only 0.6%. However, this overall figure masks a much larger increase in production in Latin America and the Caribbean (LAC), where the average annual growth was 7.1% (by contrast, growth in the United States and Canada was unimpressive).

Within the Region of the Americas, production continued to be concentrated in a small group of countries. The two principal producers of the Region, the United States and Canada, accounted for, on average, 96% of regional production. When LAC is considered separately,

production is seen to be concentrated in three countries, Brazil, Argentina, and Mexico, which contributed almost 80% of the total LAC production. Thus we see a “fractal” pattern of production (that is, as the size of the group is reduced, it remains true that a small number of countries account for a high proportion of the group’s production). This pattern holds for the defined regional subgroups and, more generally, for the global income brackets.

The second important conclusion has to do with how the countries of the Americas relate to each other when publishing the results of their research. Networks of collaboration can indicate common research agendas or the availability of financing in certain countries. The proportion of publications originating in LAC that were written without any collaboration (at the personal or institutional level) declined sharply between 1992 and 2001, reflecting an opening of LAC scientists to collaboration. Based on the information at hand, it is not possible to say whether this opening was spurred by the availability of new communication technologies or whether it simply reflects the process of globalization in a more general sense. What can indeed be affirmed is that this opening led to an important increase in collaboration with countries outside the Region—and almost exclusively with countries in the high-income bracket.

These collaboration patterns, however, have yielded different results in terms of the visibility they give to publications. Visibility can reflect the quality of a publication, but it can also indicate the depth of the collaboration network behind it. Specifically, the study shows that the participation of LAC in global production declines significantly as the visibility of publications increases. That pattern is repeated within the Region of the Americas, where the concentration of the large producers is even greater for high-visibility publications than for publications in general. With regard to collaboration, publications with high or very high visibility correspond for the most part to collaborations with high-income countries within the Region (the United States and Canada) and outside it (for example, European countries).

Within the Region, scientific output in the field of public health presented the same characteristics as general health research, being concentrated in a handful of countries. Nevertheless, there were some notable differences in patterns of collaboration. In public health, the type of collaboration that grew fastest during the decade was collaboration with high-income countries outside the Region.

### **1.3.1 Discussion of the Presentation by Dr. Guillermo Paraje on Scientific Output in the Region of the Americas, 1992–2001**

The following points arose during discussion of the presentation:

This is an important baseline study. However, it evaluates only one aspect of research production. An effort should be made to expand the study so that it includes indicators of quality, with data that make it possible to link the publications with the level of resources invested and to measure associations by type of publication. For example, one could seek to determine whether indexing in MEDLINE or ISI increases as a result of national and regional efforts to improve the quality of the journals. It is very important to consider indicators of quality so as not to discourage efforts to invest in health research in some countries, as the existing study could suggest that the health research situation has not changed even though



measures to support and promote research are being taken. The study should also look at other elements related to scientific publication such as travel subsidies, participation in conventions, the order of authors, etc. It was suggested that “visibility” needs to be better defined. Participants also called for attention to factors that support the publication of journals in the Region of the Americas and that do not affect visibility, so as not to discourage publication in national journals. The data should be disaggregated according to the language in which works are published.

#### **1.4 Foundations for a PAHO Research Policy and the Role of the Secretariat, the Research Promotion and Development Unit, and the Advisory Committee on Health Research**

##### **1.4.1 Presentation by Dr. Rebecca de los Ríos, PAHO/WHO Regional Adviser, on Governance of Health Research (Document ACHR39/2005.06)**

Dr. de los Ríos, of the PAHO Research Promotion and Development Unit, spoke on “Research Governance: An Essential Public Health Function.” She offered general observations on health research and discussed the role of the national health authority; the definition of the national health research system; the steering role in health research; financing models and securing of funds; creation and sustainability of resources; and the publication, synthesis, dissemination, and utilization of research. She concluded by outlining areas for PAHO technical cooperation intended to strengthen the governance of health research (see document ACHR39/2005.06).

##### **1.4.2 Presentation by Dr. Rebecca de los Ríos on the PAHO/WHO Research Grants Program (Document ACHR39/2005.05)**

Dr. de los Ríos, of the PAHO Research Promotion and Development Unit, presented a report on the Research Grants Program. She stated that the report, in addition to describing the projects approved under the program’s different modalities, was intended to stimulate reflection on what the role of the ACHR should be in research promotion given the non-availability of funds for the PAHO/WHO Research Grants Program. As a result of budgetary reforms within PAHO, funds for the program will not be assured for the biennium 2006–2007.

The speaker outlined the objectives of the program, summarized its results from 1996 to 2005, and analyzed the program’s role in the Region. In 1997 there was a change in the financing and grantmaking protocols, suggested by the ACHR. Priority lines of research were designated and four modalities were identified: multicenter collaborative projects, regional research competitions, grants for graduate theses (master’s and doctoral), and fellowships/grants for advanced training in public health research. In 2005 the program adjusted its priority topics to relate more closely to the Millennium Development Goals and the “unfinished agenda” mentioned by Dr. Mirta Roses in her opening presentation.

Dr. de los Ríos ended with a review of the program’s strategies, emphasizing criteria for strategies to promote health research, such as seed funds to promote generation of knowledge in the Region.

## ***Limitations***

This fund awards grants through open competition. With the exception of the multicenter projects, therefore, there is an inherent bias toward countries with greater competitiveness and capacity, although the financing in some cases may be directed to research in less developed areas of these countries.

In terms of impact, there has been limited publication of research findings, and little is known about the impact on health policies. The grants program was conceived as a cooperation instrument to promote and encourage research by mobilizing financial resources from national and international donors and agencies. It is also a means of facilitating the synthesis of evidence from research.

### **1.4.3 Presentation by Dr. Luis Gabriel Cuervo, Chief of the Research Promotion and Development Unit of PAHO/WHO**

Dr. Cuervo suggested that if one wants to reconsider the decision to cancel the Research Grants Program, it will be useful to review a proposal that considers the needs for research development as well as alternatives and proposals for promoting research that responds to the needs of the Region and of the Organization.

He outlined different interpretations and uses of the term “evidence,” and showed how different research methodologies can be used to answer different questions. Investigators and policy makers need different kinds of knowledge; thus it is important to build bridges between them and to provide evidence in appropriate formats when making information and knowledge available. He also emphasized the importance of having users capable of interpreting evidence and integrating knowledge in a given context, evaluating its impact in light of local priorities, the values of the population, and the availability of resources.

Dr. Cuervo then discussed possibilities for cooperation in health research within the framework of the following five strategic objectives of PAHO:

1) *Respond better to country needs* (priority issues to be addressed in the short and medium terms; research focused on the needs of those who will use the knowledge; barriers to use and implementation strategies; areas of common interest to governmental and nongovernmental entities, excellence groups, patients, financing agencies, and the population; reduce the time lag in reporting of evidence).

2) *Adopt new modalities of technical cooperation* (areas of global, regional, national, and local research; research areas that are important but likely to remain neglected; integration of information into systems; bottlenecks resulting from the inability to pick out relevant evidence from the sea of information; access to financing sources; training in research methodology; knowledge of ethical standards and principles; development of areas such as the economics and evaluation of services).

3) *Be a regional forum for health in the Americas* (a common language; build on existing initiatives; consider implementation and evaluation as integral parts of certain projects; complementary disciplines that enrich each other; promote the participation of civil society in determining needs and priorities).

4) *Create a knowledge-based/learning organization* (standards of excellence; leadership in methodological, ethical, and philosophic debates; culture of consultation and feedback; learn by teaching through partnerships with schools of public health; sharing of knowledge through participatory development of research; increase the interaction between those who benefit from knowledge and those who generate it; dissemination, ownership, relevance).

5) *Enhance management practices* (capacity for negotiation to gain access to evidence; strategies to avoid duplication of efforts and identify knowledge gaps; knowledge “just in time”; carry out a systematic review before investigating; regional solidarity; strategic partnerships; systematic approach to partnerships, evaluating effects and impact as well as alternatives).

Dr. Cuervo called for maximizing opportunities by working with regional networks (for example, INCLEN, Cochrane, and FLACSO). He urged that efforts be made to promote solidarity and collaboration that can help to strengthen the research infrastructure in those countries most in need of it.

#### **1.4.4 Debate on the Foundations for a PAHO Research Policy and the Role of the Secretariat, the Research Promotion and Development Unit, and the Advisory Committee on Health Research**

The presentation on the steering role in health research serves as a reference for the Committee, as it suggests a list of elements for discussion that were in some way included in the exercises for evaluating the performance of the Essential Public Health Functions, which describe the role of the health authority in health research. It was requested that the document clarify the terms “governance” and “steering role,” as these do not have the same meaning.

Participants noted that PAHO presented an overview of research production in the Region but did not attempt a diagnosis of PAHO’s technical cooperation in the area of research. The viability and feasibility of this cooperation should be analyzed, as well as the vision for its future direction.

PAHO is perceived as working to strengthen specific capacities in health research, for example, the capacity to seek funds, to publish, to build networks, to set priorities, and to apply knowledge to practice both inside and outside of PAHO.

It is not sufficient merely to identify priorities; there is also a need for advocacy activities. Steps should be taken to maintain and strengthen the Region’s capacity and to encourage development in those countries that do not yet have the capacity to manage health research.

## **2. Debate on the Work of the Committee, the Role of the Secretariat as a Whole, and the Role of the Research Promotion and Development Unit**

### **a) The PAHO Secretariat and the Research Promotion and Development Unit**

In discussion, participants emphasized the need to define a clear strategy and policy on health research for the Region, based on policies adopted by the Governing Bodies of PAHO and The Pan American Sanitary Conference. There exists a favorable environment at the global level, with research forms figuring on the international agenda, as expressed in the agreements of the Ministerial Summit on Health Research held in Mexico in 2004.

The ACHR should advise the entire Organization, not only the Research Promotion and Development Unit. The ACHR does not replace the technical Unit; it should advise on the subject of research management, including an assessment of the impact of PAHO technical cooperation on health research.

Efforts should be made to take advantage of PAHO's work at the national, regional, and international levels to promote subregional and regional agendas of research for action. PAHO should forge strategic alliances to support research in the Region and should hold discussions regarding the steering role of the health authorities, the strengthening of capacity in the countries, and the possibility of using science and technology observatories. Technical cooperation should include the training of investigators, either in person or through distance education, to enable them to secure financing, write protocols, publish their work, and translate knowledge into action.

### **b) Work of the Committee**

The Committee can provide an external vision and a link with the investigator community. As an advisory body, it should offer perspectives on PAHO's own programs and monitor the actions of its political bodies. It should think proactively, anticipating needs, studying the context, and alerting the Director to situations that she will need to address.

It was suggested that the Committee work with subcommittees or ad hoc groups, and that it explore the resources available for carrying out its work virtually. The Committee should alternate between Washington, DC and the countries for its physical meetings so that it can provide feedback on the countries' research systems.

It was suggested that the Committee act as a liaison between PAHO and the various working networks and promote strategic partnerships. It should provide a connection to other regions of the world and facilitate ties with national boards of science and technology, ministries of health, and investigators, and between these entities themselves.

### **c) Key Issues that the Committee Should Discuss and Address in the Near Future**

1. Financial resources for participation in multicenter research at the country and subregional levels, and among groups dealing with common problems, as well as internal linkages within PAHO for research projects
2. Research priorities
3. Dissemination of research results

4. Building bridges between investigators and health policy makers
5. Training within PAHO and at the country level on topics such as the search for financing, preparation of successful fellowship applications, presentation of research projects, writing of scientific articles, and synthesis of knowledge

### **3. Health Research in Chile**

The panel on health research in Chile began with remarks by Dr. Pedro García Aspillaga, Minister of Health of Chile. This was followed by five presentations :

- 1) Analysis of scientific research in Chile, Dr. Jorge Allende, Chilean Academy of Sciences
- 2) Clinical research in Chile, Dr. Benjamín Stockins, National Council on Health Research
- 3) Biomedical research in Chile, Dr. Yedy Israel, Chilean Academy of Sciences
- 4) Public health research, Dr. Jorge Jiménez de la Jara, Catholic University of Chile
- 5) Scientific research and the assistance network in Chile, Dr. Osvaldo Salgado, Subsecretary of Assistance Networks

### **4. Presentation and Discussion of the Final Report**

#### **4.1 Closing Session**

Dr. Mirta Roses, Director of PAHO, thanked the members of the ACHR and all the participants for their collaboration with the Organization and their valuable recommendations. On behalf of the PAHO administration, she pledged to make all possible efforts to implement these recommendations, taking into account the limitations of the situation.

Dr. Roses concluded by affirming that the ACHR provides the scientific leadership that the Organization needs in order to fulfill its advocacy role in promoting research to improve the health of the Region's peoples.

A first draft of the conference report was discussed in a plenary session of the meeting, and it was agreed that a final version would be completed within the next few weeks for submission as a report to the Director.

### **5. Summary of Recommendations by the ACHR and its Guests to the Director of the Pan American Health Organization**

The Committee operates on the basic premise that research can help reverse the deterioration in the health services and the marginalization of the population through the incorporation of research findings and the best scientific evidence in health policies and actions that seek to strengthen health systems and promote the well-being of populations, equity, and regional solidarity.

There was agreement on the need to foster a culture of research so that research results have an impact on society and are applied for the benefit of end users or populations. The

evaluation of research outcomes should include, among other things, the extent to which the findings are used to inform decision making and public policy making, as well as measurement of their direct health benefits.

### **5.1 Characteristics of the Committee**

The Committee will function as a continuing live forum with periodic partial rotation of membership. It should exert influence within the Organization and should make recommendations and propose action plans.

The Committee should be broadly representative in order to encourage rich dialogue and lateral thinking. It should have a multidisciplinary membership that reflects the different types of expertise needed at different points in the cycle of the use of research evidence, and that includes the bodies most closely involved in the generation and use of knowledge. The incorporation of health policy makers into the ACHR was emphasized during the meeting, in part for consistency with recommendations to the countries.

### **5.2 Objectives of the Committee**

Advise the Director and the Organization and its technical programs in order to (a) ensure that the resources invested in health research have maximum impact on the well-being of populations and foster processes of collaboration, regional integration, and sharing of knowledge, and (b) reduce inequities by strengthening the steering role and the governance of health research.

Serve as the antenna, radar, sentinel, observatory, and intelligence that keeps the Organization informed and prepared to confront new challenges in the area of health research and the use of knowledge in health policy making.

Contribute to the strategic functions of the Organization and to its efforts to help the countries improve the production, recovery, evaluation, and use of robust evidence that is relevant for health management.

Articulate the regional ACHR with the global ACHR of the WHO, developing lists of needs and resources for areas to be developed and helping to set priorities in health research (considering aspects such as the burden of disease, local concerns, and vulnerability); seek some short-term successes while programming long-term initiatives.

### **5.3 Recommendations on Operation of the ACHR**

Use electronic communications to work together on a day-to-day basis, with the Organization providing support for periodic meetings.

The Committee should rely on a circle of advisers and on ad hoc committees and subcommittees, with contact persons in different countries.

It is suggested that meetings be held annually, whether through virtual means or as physical conferences held alternately in Washington, DC and PAHO member countries.

The Committee should have a secretariat, represented by the Research Promotion and Development Unit, in order to carry out the recommendations adopted by the Organization and the Director.

It should also have a president, and the period of service of the president and the Committee members should be defined. A stepwise rotation will make it possible to retain the benefit of experience while at the same time encouraging new ideas and contributions. This could mean, for example, rotating a third or a fourth of the Committee every year and having members serve for periods of three or four years.

The members of the ACHR should be drawn from countries of the Region with varying levels of development in health research, and from different disciplines and professions. It is suggested that at least one member represent health policy makers, and community and media representatives should also be invited to serve.

#### **5.4 On the Role of PAHO in Health Research**

Steps should be taken to formulate a clear strategy and policy on health research for the Region. This strategy should be based on policies adopted by the Governing Bodies and the Assembly. The global environment is currently favorable to such efforts, with research figuring on the international agenda, as expressed in the agreements of the Ministerial Summit on Health Research held in Mexico in 2004.

PAHO is urged to provide technical cooperation to help the countries strengthen their capacity to exercise a steering and governance role in regard to research, and to promote collaboration on research problems and the mobilization of resources.

PAHO should work with different actors in the scientific community, governments, and society at large to strengthen specific capacities in health research. These include, for example, seeking funds, publishing, networking, setting priorities, and applying knowledge to practice, both inside and outside of PAHO. PAHO should seek to strengthen these aspects in countries that already have a research capacity and to support the creation of such capacity in those countries that do not.

#### **Annexes:**

- Meeting agenda
- List of participants
- List of documents
- Documents