

## **IV PAN AMERICAN CONFERENCE ON PHARMACEUTICAL EDUCATION**

**Santiago, Chile, November 29-December 3, 1999**

### **INTRODUCTION**

The Pan American Health Organization, Regional Office of the World Health Organization (PAHO/WHO) in collaboration with the American Association of Schools of Pharmacy of the United States of America (AAP) organized the I Pan American Conference on Pharmaceutical Education in Miami from 9 to 12 January 1990 for the purpose of promoting the collaboration among colleges, schools, faculties and departments of pharmacy in the Americas. In this Conference a Declaration of Principles was adopted in order to promote the role of the pharmacist as essential member of the health team.

The II Conference organized by the Mexican Pharmaceutical Association, the AAP, and PAHO/WHO, was held in Ixtapa, Mexico, from 4 to 9 November 1993. This Conference approved the Mission of the Pharmaceutical Education in the Americas, in order to serve as guide to all the educators of Pharmacy in the Region taking into account the peculiarities, conditions and priorities of each country.

The III Conference was held in Buenos Aires, Argentina from 21 to 23 October 1996 and was organized by the University of Buenos Aires, the "Ente Coordinador de Unidades Académicas de Farmacia y Bioquímica (ECUAFyB)", the AAP, and PAHO/WHO. During this event, it was decided to establish the Pan American Commission of Pharmaceutical Education composed of a delegate from each country in the Americas that has a faculty, department, school, or college of pharmacy. A Steering Committee will coordinate the Commission's activities. It was also decided to hold the IV Conference in Chile under the coordination of the University of Chile and the participation of all pharmacy schools of the country.

### **AGREEMENTS OF THE IV CONFERENCE**

Based on the results of the previous conferences, the Delegates to this Conference approved the following:

1. The current Delegates will continue to perform their functions up to the next Conference. This agreement was taken due to the need for giving continuity to the recommendations adopted within the Conference, to have a contact person in every country to disseminate the agreements and to coordinate the specific activities between this conference and the next. Furthermore, the Delegates commit themselves to inform in writing the Secretariat of the Pan American Commission of Pharmaceutical Education (PAHO/WHO) about their actions in

disseminating the agreements of this Conference and any changes in Delegate status.

2. Reviewing the pending commitments of the III Conference, the Delegates identified as priority the following actions:

- Under the coordination of the Catholic University of Chile (Dr. Guillermo González), the Web page of the Directory of Universities/Schools of Pharmacy, maintained by the International Pharmaceutical Federation (FIP), will be reviewed and those faculties, departments, schools, and colleges in the Americas that are not included, will be requested to register.
- Coordinate and organize a working group to develop a proposal on accreditation of educational institutions or programs aimed at the development of common standards for the Americas. It will also develop a proposal on establishing an entity for accreditation of pharmacy educational institutions or programs, which in its first stage would be directed to Latin America. These results will be presented in the V Conference. The Delegate of Brazil, Dr. José Aleixo Prates and Silva will coordinate this activity.
- Coordinate and organization of a group of experts for developing a proposal on recognition of professionals among countries. The proposal will be submitted in the V Conference and the activity will be under the responsibility of the Delegate of Mexico, Dr. Carmen Giral.
- Under the responsibility of the American Association of Colleges of Pharmacy (AACCP), guidelines for establishing of national organizations of pharmacy schools in each country in the Americas will be developed and disseminated.
- Preparation of a Glossary of terms focused to the educational area, which will be coordinated by PAHO.
- Design a program for the exchange of faculty members between pharmacy schools of the Americas, which will be under the responsibility of the Delegate of Puerto Rico, Dr. Iliá Oquendo and of the AACCP.

The coordinators of the indicated activities in addition to assuming the responsibility of their development commit themselves to look for sources of financing such activities.

The Executive Committee of the Pan American Conferences on Pharmaceutical Education will monitor the fulfillment of these commitments.

3. Based on the recommendations of the discussion groups carried out during this Conference, the Delegates recognized the competencies that are required of the pharmacist in order to assume a leadership role in drugs in this changing health care environment. These competencies agree with the ones recommended by the Working Group carried out in Lima, Peru, (6-9 July, 1998) and are consistent with the ones arising from the Working Group sponsored by the World Health Organization, carried out in Vancouver, Canada in July 1997.
  1. Be member of the health care team that provides high quality, essential services that include clinical, technological, analytical, and regulatory aspects. Note that pharmacists are essentially public health professionals and their public health function is exercised in all areas in which they work – from the drug industry itself to the community, hospital, or public health pharmacy to the field of regulation.
  2. Be capable of making decisions and taking responsibility for these decisions. Self-reliance and shared responsibility for the results of therapy are elements that merit development in the course of professional training. Moreover, the ability to make decisions involves not only the store of knowledge that the pharmacist imparts (and appropriately receives), but also the development of decision-making skills.
  3. Be a communicator. Due to the ideal position of the pharmacist between the physician and the patient, it is vital that he/she has self confidence to properly educate and inform the patient to ensure compliance with treatment; to provide the physician with supplementary knowledge to aid in rational prescribing; and, when dealing with the general public, to promote the rational use of drugs and foster intelligent self-medication.
  4. Be a leader. Assuming leadership of the health team in all that concerns drugs relates directly to education, requiring continuous updating on developments in the field. This leadership includes how the pharmacist should perform in multidisciplinary situations, in individual situations with patients or groups of patients, and in any setting where support or intervention is needed.
  5. Be a manager. Not only with respect to human, material, and financial resources, but also information and appropriately transferring that information to the rest of the health team. In line with the trend in areas of future development, the ability to manage information sources, analyze that information, and produce and disseminate information appropriately, according to the audience, is also considered a key element in professional education.

6. **Never stop learning.** It can not be expected that the mere completion of pharmacy studies will be sufficient to practice the profession appropriately. The principles, concepts, and commitment to the profession must be cultivated throughout the pharmacist's professional life. Furthermore, learning is considered important for the use of general educational techniques that will assist the pharmacist in educational and informational undertakings with other professionals, patients, and the general public.
7. **Teach (serve as an educator).** Participation in teaching activities not only transfers knowledge but represents a way of gaining new knowledge and skills.

The Delegates ratified the areas of pharmaceutical practice that are common in the countries of the Americas.

**Areas of Practice:**

- Community Pharmacy**
- Hospital Pharmacy**
- Industrial Pharmacy**
- Education and Research**
- Pharmaceutical Regulation**

**Areas of knowledge:**

- **Basic Sciences**
- **Pharmaceutical Sciences**
- **Biomedical Sciences**
- **Social and Administrative Sciences**
- **Integration Activities**
- **Pre-professional practices**

**Thematic components by area of knowledge:**

<b>BASIC SCIENCES</b>	<b>Chemistry:</b>
	<ul style="list-style-type: none"> <li>➤ <b>General</b></li> <li>➤ <b>Inorganic</b></li> <li>➤ <b>Analytical</b></li> <li>➤ <b>Organic</b></li> <li>➤ <b>Physical Chemistry</b></li> <li>➤ <b>Biochemistry</b></li> </ul>
	<b>Informatics</b>
	<b>Biology</b>

	<b>Physics</b>
	<b>Mathematics</b>
	<b>Research methodology</b>
<b>PHARMACEUTICAL SCIENCES</b>	<b>Introduction to the professional practice</b> <b>Pharmacology</b> <b>Pharmacochemistry</b> <b>Pharmacokinetics</b> <b>Biopharmacy</b> <b>Pharmaceutical Technology</b> <b>Biotechnology</b> <b>Toxicology</b> <b>Quality Assurance</b> <b>Pharmacobotanic/pharmacognosy</b> <b>Pharmacogenetics</b>
<b>BIOMEDICAL SCIENCES</b>	<b>Biostatistics</b> <b>Anatomy</b> <b>Physiology</b> <b>Phytotherapy</b> <b>Parasitology</b> <b>Microbiology</b> <b>Physiopathology</b> <b>Immunology</b> <b>Pharmacotherapeutics</b> <b>Nutrition</b>
<b>SOCIAL SCIENCES, SCIENCES OF BEHAVIOR AND ADMINISTRATIVE SCIENCES</b>	<b>Education techniques</b> <b>Administrative sciences, marketing and economics</b> <b>Pharmacoeconomics</b> <b>Human and interpersonal relationships</b> <b>Communication techniques</b> <b>Analysis and evaluation of biomedical literature</b> <b>Public Health</b> <b>Pharmacoepidemiology</b> <b>Pharmaceutical management</b> <b>Legislation</b> <b>Pharmaceutical, ethical, and bioethical deontology</b>
<b>SUBJECTS OF INTEGRATION</b>	<b>Simulation of cases, problem solving, the activities of pharmaceutical care, development of critical thinking</b>
<b>PRACTICES PREPROFESSIONAL</b>	

4. Many of the competencies previously stated are to be obtained through specific educational processes. Some of them are student presentations in class, discussion by small groups, simulations, problem-based education, laboratories, computer-assisted instruction, distance learning and cared patient. Those processes also constitute methodological strategies for developing communication skills.
5. The Commission agreed to hold the V Pan American Conference on Education Pharmacist in Miami, USA in the fall of the 2002. The Conference will be coordinated by the AACP and, in addition to focusing the subjects identified in point two of this declaration, will also include the discussion of teaching methodologies to assure the achievements of the qualities and characteristics identified as necessary for the practice of pharmacy.

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