

# Veterinary public health activities in the Pan American Health Organization over the past 58 years: 1949-2007

Albino Belotto<sup>(1)</sup>, Joe R. Held<sup>+(2)</sup>, Daniela Fernandes<sup>(3)</sup> & Eduardo Alvarez<sup>(4)</sup>

## Summary

The veterinary public health activities of the Pan American Health Organization (PAHO) over the past 58 years have been devoted to the strategic orientation and development of priorities for the health sector with three main strategic areas, as follows: surveillance, prevention and control of zoonoses, prevention of foodborne diseases and promotion of animal health to boost production and productivity and, consequently, food security and socio-economic development. For PAHO, the link between health and agriculture is undeniable and their integration essential.

## Keywords

Food safety, Foot and mouth disease, International organisation, Pan American Health Organization, Veterinary public health, Zoonoses.

## Attività di sanità pubblica veterinaria dell'Organizzazione Panamericana per la Sanità negli ultimi 58 anni: 1949-2007

### Riassunto

*L'attività a tutela della sanità pubblica veterinaria dell'Organizzazione Panamericana per la Sanità (PAHO) negli ultimi 58 anni è stata concentrata principalmente sull'orientamento strategico e sullo sviluppo delle priorità nel settore della sanità nei seguenti ambiti: vigilanza, prevenzione e controllo delle zoonosi, prevenzione delle tossinfezioni alimentari e promozione del benessere animale per l'incremento della produzione e produttività e, di conseguenza, a tutela della sicurezza alimentare e per lo sviluppo socioeconomico. Per la PAHO, il legame tra sanità e agricoltura è innegabile e la loro integrazione essenziale.*

### Parole chiave

Afta epizootica, Organizzazione internazionale, Organizzazione per la Sanità Panamericana, Sanità Pubblica Veterinaria, Sicurezza Alimentare, Zoonosi.

(1) Chief, Veterinary Public Health Unit, Pan American Health Organization/World Health Organization (PAHO/WHO), 525 Twenty-third Street, N.W., Washington, DC 20037, United States of America  
belottoa@paho.org, abelotto@panaffosa.ops-oms.org

(2) Volunteer, Veterinary Public Health Unit, Pan American Health Organization/World Health Organization (PAHO/WHO), 525 Twenty-third Street, N.W., Washington, DC 20037, United States of America

(3) Technical Officer, Veterinary Public Health Unit, Pan American Health Organization/World Health Organization (PAHO/WHO), 525 Twenty-third Street, N.W., Washington, DC 20037, United States of America  
fernandd@paho.org

(4) Veterinary Public Health Advisor in the PAHO/WHO Office in Chile, Avenida Providencia No. 1017, Piso 4 y 5, Casilla 9459, Santiago, Chile  
alvarez@chi.ops-oms.org

## Introduction

---

The principal role of the Pan American Health Organization (PAHO) Veterinary Public Health (VPH) Unit is to serve as a catalyst for integrated action, especially between the health and agriculture sectors where functions and resources related to zoonoses and food safety are often dispersed and separate. PAHO serves as the regional office for the World Health Organization (WHO) in the Americas and its Member States have long recognised that the health of animals and human beings is inextricably linked. PAHO and its member states share the common goal of protecting, promoting and improving the health and well-being of the communities that they serve (1).

In collaboration with animal disease control and public health authorities of the member governments in the Americas, great strides have been made over the past 58 years in controlling foot and mouth disease (FMD) and in controlling a wide variety of zoonotic diseases, such as rabies, anthrax, brucellosis, hydatidosis, bovine tuberculosis, equine encephalomyelitis, leptospirosis, cysticercosis and a variety of foodborne diseases. The Organization has also played an important role in linking veterinary expertise in support of health programmes, such as the provision of special animal resources required for biomedical research and testing. In this paper, the authors attempt to provide the historical highlights of the VPH Unit.

Established in 1902 as an independent inter-American organisation specialised in health, PAHO is the world's oldest international health agency. In 1925, the control of animal diseases was recognised by PAHO as an important part of public health when a document prepared by the organisation at that time stated '...prevent the international spread of infections and diseases that could be transmitted to humans...', thus reflecting an early concern in regard to the control of the zoonoses.

Several years later, the international community, concerned with the occurrence of World War II, recognised an urgent need to establish an entity to ensure the continuance of

international peace. Thus, the United Nations (UN) was established and within its structure a provision was made for specialised agencies. One of the first of these was the WHO which was established in 1948.

Upon the creation of the WHO, the existing PAHO was incorporated as its regional office for the Americas and, as such, was transformed into a specialised health agency of the UN while continuing to serve as the primary consultative health agency for the Organization of American States (OAS).

## The Veterinary Public Health Unit (VPH) at PAHO

---

In 1945, PAHO's Director, Hugh Cumming, received a report of an outbreak of anthrax in Haiti that had killed thousands of animals and infected a large number of humans, resulting in extensive illness. This occurrence of disease confirmed the need for PAHO to have activities related to veterinary science.

In 1946, PAHO received a request to investigate an outbreak of equine encephalomyelitis in Panama. The same year, an outbreak of FMD occurred in Mexico which killed a number of animals in that country and threatened the cattle industry and economies of the Central American countries and the United States.

Before the establishment of a formal VPH Unit, PAHO had obtained the services of Aurelio Málaga Alba, a veterinarian from Peru, to provide advice to the Director on a programme to control urban rabies in the Dominican Republic and rabies in the wildlife along the United States/Mexico border, in addition to other matters related to zoonoses including the establishment of a field station in El Paso, Texas, devoted to the control of rabies in the United States/Mexico border states.

The success of making technical resources available to reduce and eliminate outbreaks of anthrax in Haiti, equine encephalitis in Panama, rabies in the Dominican Republic and to meet continuing requests from member states for technical advice on the control of animal diseases, led the Director of PAHO,

Fred Soper, to establish the VPH Unit on 1 July 1949. Benjamin D. Blood, a veterinarian from the United States, with experience in public health, was appointed as the first coordinator of this Unit and was responsible for initiating the technical organisation of the Unit.

In April 1950, the report of the PAHO Director to the member states contained the following statement 'the Pan American Sanitary Bureau entered into the field of veterinary public health with the objective of promoting national programs to prevent the infection of people with animal diseases and to coordinate the international aspects of such programs'. This Unit was to include a wide variety of activities in which the veterinary profession could make special contributions to the improvement of human health.

Under Blood's leadership, two important events occurred, as follows:

- the first was a request in 1951 from the OAS to assume responsibility for the administrative and technical operation of the Pan American Foot and Mouth Disease Center (PANAFTOSA) in Rio de Janeiro (2)
- the second, in 1956, was the establishment of a Pan American Zoonoses Center (*Centro Panamericano de Zoonosis*: CEPANZO) in Azul, Buenos Aires Province, in Argentina which, in 1991 became the Pan American Institute for Food Protection and Zoonoses (*Instituto Panamericano de Proteccion de Alimentos y Zoonosis*: INPPAZ) in Martinez, Buenos Aires Province in Argentina.

It should be noted that in 1997 the activities conducted by INPPAZ in the field of zoonoses were transferred to PANAFTOSA to form a combined centre that served countries of the region in the control of FMD, zoonoses and food safety. In 2005, in a move for greater efficiency, all functions and resources of INPPAZ were combined with those of PANAFTOSA.

In 2007, PAHO initiated further decentralisation of technical cooperation in country support and decentralised strategies to better serve member countries. As a part of this, in April 2007, the VPH Unit was transferred from the headquarters of the

Organization in Washington, DC, to this combined centre located in Brazil. The Unit remains part of the Health Surveillance and Diseases Management Area (HDM), one of PAHO's seventeen priority areas. The Unit coordinates the activities of this new centre and includes a network of veterinary professionals assigned to many countries in the Americas. Currently, the Unit faces not only old challenges such as the control of FMD, rabies and various foodborne diseases, but also a number of new challenges with the increasing emergence of newly recognised pathologies, such as avian influenza, bovine spongiform encephalopathy (BSE), severe acute respiratory syndrome (SARS), West Nile virus, Ebola, and *Escherichia coli* 0157:H7. Several factors have contributed to the increasing importance of these activities, particularly the increased movement and migration of populations around the world and the evolution of massive food production programmes which, when combined, represent a serious threat to public health, the environment, tourism and national economies.

## Mission and function

The Unit's mission can be summarised as follows:

- contribute to human well-being by providing technical support to member countries in their activities to produce and distribute sufficient proteins of animal origin and to ensure the quality and safety of these products
- avoid the undesirable impact of diseases of animals communicable to humans
- protect the environment from undesirable impacts resulting from the presence of animals and animal industry
- contribute to the solution of health problems by developing animal models required for biomedical research
- contribute to the conservation of species needed for this research.

## Centres

During the past 58 years, three Pan American centres have been coordinated and supervised by the coordinator of the VPH Unit, namely: the Pan American Foot and Mouth Disease Center (PANAFTOSA), the Pan American Zoonoses Center (CEPANZO), closed in 1991 to become the Inter-American Institute for Food Protection and Zoonoses (INPPAZ) that was closed in 2005.

### Pan American Foot and Mouth Disease Center

The first centre under the Unit's coordination was PANAFTOSA, established in Rio de Janeiro in 1951 (2). At that time, the region of the Americas had not previously dealt with FMD and consequently had no professionals with FMD laboratory experience. Therefore, PAHO contracted experts from Europe to commence the training of a group of highly qualified Latin American professionals who would run the Center. One of the functions of the Center is to develop and transfer knowledge on the diagnosis, production and quality control of vaccines, diagnostic reagents, establishment of research animal facilities, systems for surveillance and information, such as strategies and operational methods for the prevention, reduction and elimination of FMD.

The Center not only supports the development of human resources and the establishment of national and regional programmes through national and regional agreements and organises periodic meetings involving Agriculture ministries, but also has been successful in the development of methods, techniques and procedures required for effective animal health programmes. In addition, it has played an instrumental role in adapting and incorporating advances developed in other institutions to serve the Center's activities for an effective transfer of knowledge and technologies to member states.

The Center's assistance to member states for the development of programmes to control, eradicate and prevent the reintroduction of FMD has been most important, particularly by

providing advice and guidance on how to obtain the economic resources required to implement these programmes. Its main achievements are as follows:

- development of diagnostic methodology
- creation of an oil adjuvant FMD vaccine
- establishment and coordination of the Continental Vesicular Diseases Information and Surveillance System (SIVCONT) in 1973
- implementation of the hemispheric plan for eradication of foot and mouth disease (*Plan Hemisférico de Erradicación de la Fiebre Aftosa: PHEFA*) in 1988
- promotion of a managerial approach between official and private sectors.

At the Hemispheric Conference on the eradication of FMD held in Houston from 3 to 4 March 2004, in which both public and private sector agricultural and food production entities participated, representatives expressed a collective desire to unite forces to eradicate FMD from the Americas. At this meeting, the Inter-American Group for the Eradication of Foot and Mouth Disease (GIEFA) was created with the participation of public and private sectors in all sub-regions.

Also significant is the Center's role in promoting and standardising diagnostic laboratory techniques and effective methods for the quality control of vaccines, as well as the production and distribution of diagnostic reagents. This was achieved through workshops held at the Center and grants for in-service training were made available in the laboratories of member countries. PANAFTOSA also was designated by the World Organisation for Animal Health (OIE: Office International des Épizooties) as a FMD reference centre.

In the mid-1970s, a long series of border agreements culminated in the International Technical Cooperation Agreement for the Control and Eradication of Foot-and-Mouth Disease in the River Plate Basin (4). With consulting and coordination provided by PANAFTOSA, the agreement was underwritten by the governments of Argentina, Brazil and Uruguay and by PAHO, represented by PANAFTOSA. The agreement was signed on 24 June 1987 in Porto Alegre,

Rio Grande do Sul, Brazil. Paraguay joined the agreement five years later, in 1992. The objectives set during the first five-year stage were to consolidate control mechanisms and achieve the eradication of FMD in the area comprising the Argentinian provinces of Entre Rios, Corrientes and Misiones, the state of Rio Grande do Sul in Brazil and all of Uruguay. The principal successes of this agreement were the eradication of clinical disease in almost the entire initial region, the elimination of viral endemicity and the international recognition of these accomplishments (3).

When INPPAZ was closed in 2005, technical cooperation provided by the VPH Unit and PANAFTOSA was reviewed to better meet previous and new challenges, amongst which was a significant increase in human resources with expertise in VPH areas other than FMD, such as zoonoses and food safety. The technical cooperation provided by PANAFTOSA more explicitly reflected these additional areas of VPH.

### **Pan American Zoonoses Center**

At the IIIrd Extraordinary Meeting of the Inter-American Economy and Social Council meeting held at University City in Caracas on 21 February 1953, the representative of Argentina tabled a proposal for a resolution to study zoonoses. The Council analysed the proposal and, considering not only the importance of the livestock industry to the economies of the countries in the region but also the threats posed by diseases transmissible from vertebrate animals to humans, passed a resolution to 'request the Coordinating Committee for Technical Assistance (CCAT) of the Organization of American States (OAS) to include a project for the creation of a Center for training and the study of the control of the zoonoses'.

The PAHO member states, with Argentina as a principal contributor, determined that CEPANZO's fundamental mission was to support programmes devoted to the control of zoonoses, food hygiene and the provision of training resources with the creation of a centre devoted to these activities.

Activities of the Center commenced in August 1956 in facilities provided by Argentina in the city of Azul, Buenos Aires Province. The first Director was Benjamin D. Blood, a veterinarian from the United States who had extensive experience in public health, much of which was obtained during service in the military during World War II. The initial activities of the Center included diagnosis, prevention and control of some of the most important zoonoses in the region (rabies, brucellosis and hydatidosis); emphasis was placed on the training of professionals and support staff. The Center was financed by the Argentina and the OAS.

CEPANZO's technical cooperation services to the countries of the Americas were extended to other zoonoses. The demand for training increased and exceeded the levels forecast in the initial budget. This led to the development of special agreements with other institutions in Argentina.

Under the leadership of its second Director, Boris Szyfres, a veterinarian from Uruguay, a proposal was made to the United Nations Development Program (UNDP), to provide additional support to the Center by 'strengthening the Pan American Zoonoses Center in Ramos Mejia and Azul'. The proposal was approved for a five-year period commencing in January 1967.

This proposal enlarged the scope of action of CEPANZO and reinforced the technical cooperation provided to member countries. In 1967, the Center provided cooperation in the following areas: rabies, equine encephalitis, brucellosis, leptospirosis, tuberculosis, hydatidosis, food microbiology and hygiene, statistics, training including animal health planning, epidemiological surveillance, laboratory animal science and a pathology laboratory.

To meet the need to offer greater international cooperation, the Center's facilities were expanded to include facilities on two floors of the National Professor Alejandro Posadas Hospital in Ramos Mejia, Province of Buenos Aires. In 1983, the government of Argentina provided a new and more modern location for

CEPANZO in Martinez, Buenos Aires Province. Laboratory animal production facilities and an experimental field station remained in Azul. CEPANZO continued to operate until the creation of INPPAZ in 1991.

### **Inter-American Institute for Food Protection and Zoonoses**

During the XXXVth Directing Council held at PAHO in 1991, member states adopted Resolution XXI creating the Pan American Institute for Food Protection and Zoonoses (INPPAZ), located in Martinez, Argentina. The reorganisation meant that CEPANZO was disbanded and many of its functions and responsibilities in the field of zoonoses were combined with those linked to food safety that would be the responsibility of this new centre.

Food protection is one of the most important priorities for the health and agriculture sectors in practically all countries, given the millions of human cases of diarrhoea caused by food-borne diseases and the billions of tonnes of food wasted each year from contamination and improper handling. The scope of action of VPH, in concert with other sectors, programmes and disciplines, is to ensure the safety of food throughout the entire process from production, processing and distribution to consumption. This includes the organisation of an integrated and comprehensive national protection programme, the development and strengthening of analytical services, the application of hazard analysis critical control point (HACCP), good manufacture practices (GMP) and other methods in inspection services, the surveillance and control of foodborne diseases and consumer protection through community participation.

The principal role of this Center was to reduce risks to public health from foodborne diseases and contaminated food by reinforcing national food safety programmes, harmonising food safety legislation and standards, risk assessment, risk management, capacity building, communication of risk and education.

The need to re-engineer PAHO's technical cooperation strategy in support of food safety was evidenced by the availability of excellent institutions in the countries and by the various

networks developed in the region to deal with food safety, including the trend to consider technical cooperation activities across the entire food production chain (from farm to table) and by the need to enhance efficiency in the use of resources (reducing operating expenditures to increase direct technical cooperation expenditures) (5). Essentially, technical capabilities are now available in the region to implement food safety policies, programmes and projects, without the need for a specialised Pan American centre resembling that of INPPAZ.

In June 2005, the 136th Session of the Executive Committee recommended discontinuing the activities of the Pan American Institute for Food Protection and Zoonoses (INPPAZ) and a food safety team was moved to PANAFTOSA in Brazil.

### **Special project**

Non-human primates are very important in health research and testing but, in the 1970s, it became difficult to obtain some of these animals because of restrictions on their capture and sale enforced by many countries on account the threat to some populations resulting from indiscriminate trapping. In 1973, the government of Peru declared a total embargo on the hunting and capture of major wildlife species, including some that have become very important in biomedical research and testing in other countries. In 1973, the United States Public Health Service approached PAHO to seek assistance in resolving this problem. PAHO referred this to its VPH Unit and, in collaboration with United States National Institutes of Health (NIH) veterinary staff, began working together to find the most appropriate way of solving this problem. The teams concluded that whatever the outcome, they not only wanted to put a stop to the trapping of non-human primate populations but they also wished to use this problem to obtain support to contribute in a positive way to the conservation and protection of these species.

In 1975, a Letter of Agreement was signed between the government of Peru and PAHO

that established the basis for cooperation to develop a research project on the biology of non-human primates. The purpose of the Agreement was to meet the requirements of the biomedical research community while, at the same time, ensuring the sustainable management of species in their natural habitat. The NIH provided the initial funds to construct the required infrastructures and to conduct investigations on the status and population dynamics of neo-tropical primates of biomedical importance. This became known as the Peruvian Primate Project (PPP).

The mission of the PPP is to contribute to the conservation of these species so that they can thrive in their natural habitat on a sustainable basis, manage natural primate populations as a renewable natural resource, develop controlled periodical cropping and establish breeding programmes on Madre de Dios Island on the Marañon River and in captivity. Furthermore, the project contributes to community development within the designated project areas.

Since its inception, the PPP has provided the NIH, without interruption, an average of 250 animals per year for its intramural and extramural research programmes. It continues to be the only reliable, legal and sustainable source of neo-tropical primates for biomedical research institutions worldwide.

## Governing and advisory bodies

As a part of its VPH activities, PAHO has also established governing and advisory bodies that are formed by ministers of health and agriculture. In addition, there are groups of experts who can advise and work with PAHO staff to focus on and deal with specific problems or areas of health improvement.

The Unit has also contributed to the improvement of communication and has encouraged collaboration of various agencies and sectors through special inter-country meetings including the following:

- RIMSAs – Inter-American meeting, at the ministerial level, on health and agriculture (*Reunión Interamericana a Nivel Ministerial en Salud y Agricultura*)

- COHEFA – Hemispheric committee for the eradication of foot and mouth disease (*Comité Hemisferico para la Erradicación de la Fiebre Aftosa*)
- COSALFA – South American commission for the fight against foot and mouth disease (*Comisión Sudamericana de Lucha Contra la Fiebre Aftosa*)
- COPAIA – Pan American commission for food safety (*Comisión Panamericana de Inocuidad de los Alimentos*)
- REDIPRA – Meeting of directors of national programs for rabies control in the Americas (*Reunión de Directores de Programas Nacionales de Control de la Rabia en las Americas*).

## **Inter-American meeting, at the ministerial level, on health and agriculture**

RIMSAs is the only regional forum for collaboration and coordination on issues related to VPH that benefits from the participation of ministers of health and agriculture from all PAHO member states. Through RIMSAs, PAHO receives the necessary political support to develop VPH technical cooperation in member countries.

When it began in 1968, RIMSAs was a forum reserved solely for ministers of agriculture from PAHO member states. However, since 2000, the meeting started to include ministers of health from all member countries. Held every two years and coordinated by the PAHO VPH Unit, RIMSAs provides an indispensable forum for political support and consequently is of immense value in the success of technical cooperation on VPH issues.

The principal function of RIMSAs is to convene ministerial health and agriculture authorities, thereby providing optimum conditions for debate on country and regional needs and on VPH proposals from PAHO. The PAHO VPH Unit works in collaboration with the countries in creating national and regional initiatives for the prevention and control of zoonotic and foodborne diseases, for the eradication of FMD and other food safety-related measures. To develop these actions, PAHO takes into consideration the complexity of political and

economic variables as well as the technical excellence that intersectoral action requires. Consequently, RIMSA's function is highly relevant in that it takes into account national commitment, the impact of decisions made on the economy of each country and on the health of its population.

### **Hemispheric committee for the eradication of foot and mouth disease**

Resolution XII of RIMSA V (1987) was a definitive point and proved to be transcendental in the regional campaign against FMD. In their deliberations with PAHO, the ministers of agriculture proposed and agreed to establish a Hemispheric Committee for the eradication of FMD, abbreviated as 'COHEFA' from the Spanish *Comité Hemisférico para la Erradicación de la Fiebre Aftosa*. This Commission was composed of ministers of agriculture and representatives of producers in the sub-regions of North America, Central America, the Caribbean, Amazon, Andes and the Southern Cone.

This resulted in a commitment with set goals and objectives, and PAHO was to ask PANAFTOSA to coordinate activities and cooperate with the countries in the region to implement and develop PHEFA.

COHEFA came about as a result of many years of consistent efforts and its role was fundamental in achieving a series of successes. Furthermore, it consolidates these activities as part of the process of eradication of FMD from the Americas. The contributions of veterinary science to COHEFA with the characterisation of ecosystems epidemiology and the use of the strategies developed by PANAFTOSA, contributed to the probability of success of the goal.

### **South American commission for the fight against foot and mouth disease**

During the RIMSA meeting, member states agreed to establish the South American commission for the fight against foot and mouth disease known by its acronym in Spanish (COSALFA) that stands for *Comisión Sudamericana de Lucha Contra la Fiebre Aftosa*. It

serves as a forum for the directors of animal health programmes in South America.

This Commission created a place to promote, coordinate and evaluate national and regional actions in a manner that makes it possible to harmonise standards and bilateral or multilateral actions for disease control. In addition, it provides a means to coordinate efforts in relation to definitions and recommendations developed by PANAFTOSA in relation to research and advances in laboratory methods, new vaccines and diagnostic and serological techniques.

In the same way, it has stimulated the study of the effects of various ecological and epidemiological factors of animal production systems which affect the incidence of FMD, the effect of zones and regions in South America in relation to the disease and the consideration of new strategies for control and eradication.

It has also involved the participation of various sectors in the development of the programme, including livestock producers, vaccine producers, universities and other sectors, all of which participated in COSALFA meetings.

### **Pan American commission for food safety**

In the light of the major outbreaks of foodborne disease that have occurred throughout the world in the past 10 years, Resolution RIMSA12.R3 was passed in 2001 and resulted in the creation of the Pan American commission for food safety (COPAIA) that alerts national authorities to the need to take action to prevent the risk of transmission to the population and to avoid economic losses that result from food contamination.

As the global food safety situation had recently been reviewed, the fifty-third World Health Assembly issued a resolution (WHA53.15) establishing food safety as a priority and recommendations were made to member states and to the WHO Director General (7).

Resolution CD42.R3 resulted in the adoption of a strategic plan on food protection in the Americas by the Directing Council of PAHO and the PAHO Director was requested to



explore the possibility of creating a regional commission for food safety to develop regional policies in this area.

Since the creation of the World Trade Organization, countries have been encouraged to review their policies and adopt *Codex Alimentarius* standards as the scientific and technical foundation to guarantee that the food consumed by the population is safe, and to facilitate international trade in food.

A commission at the appropriate level enables leaders in the health and agriculture sectors, producers, consumers and international organisations to collaborate in all stages of development and coordination of technical cooperation in priority areas to ensure that the people of the Americas have access to safe food.

### **Meeting of directors of national programs for rabies control in the Americas**

One of the priorities of the VPH Unit at PAHO has been to provide technical cooperation to the countries of the Americas to eliminate human rabies transmitted by dogs. Commencing in 1983, PAHO began organising meetings of the directors of rabies control in the countries of the region. These meetings have become known as REDIPRA from the name in Spanish. Initially, all countries made a commitment to eliminate urban rabies from the major cities of the region. By the end of the 1980s, PAHO and each of the countries involved evaluated the progress of the plan and noted its success. Although canine rabies as a human health problem had been controlled effectively, other rabies problems still needed to be resolved. These included providing technical cooperation to countries to expand the plan to outlying areas and small villages to eliminate human rabies transmitted by dogs. Furthermore, the problem of sylvatic rabies continues. Rabies transmitted by haematophagous vampire bats in particular is especially difficult.

## **Veterinary public health unit coordinators**

The VPH unit coordinators over the past 58 years are as follows: Aurelio Málaga Alba, Benjamin D. Blood, Earl Chamberlayne, Pedro N. Acha, Mario Fernandez, Joe R. Held, Primo Arámbulo III and Albino Belotto.

## **Conclusions**

For 58 years, PAHO has provided technical cooperation on issues related to zoonoses, food safety and FMD in collaboration with its member states (6). A summary of the most significant achievements is presented below:

- human rabies transmitted by dogs, which still represents a public health threat mainly in Africa and Asia, has been eliminated in large cities and in the majority of the countries of Latin America and the Caribbean: less than 15 cases have been reported each year for the past three years; national rabies control programmes face new challenges to control rabies transmitted by wildlife, mainly by haematophagous bats
- FMD is in the final phase of elimination in the region; despite reintroduction of the disease in some areas, it is estimated that the status of 'disease-free with vaccination' will be achieved in South America within the next three years
- countries in the region have established integrated food safety programmes based on risk management and standardised legislation; efforts have focused on cooperation in the implementation of epidemiological surveillance systems, the strengthening of laboratory networks, legislation and modernisation of inspection systems
- promoting the organisation of VPH services in both agriculture and health sectors
- extensive training programmes on FMD, zoonoses and food safety throughout the region.

## Acronyms

The use of acronyms in another language often makes a text difficult to follow. For this reason, the explanation of each of the acronyms used for institutions is given again below:

- CCAT Coordinating committee for technical assistance
- CEPANZO *Centro Panamericano de Zoonosis* Pan American Zoonoses Center
- COHEFA *Comité Hemisférico para la Erradicación de la Fiebre Aftosa* Hemispheric committee for the eradication of foot and mouth disease
- COSALFA *Comisión Sudamericana de Lucha Contra la Fiebre Aftosa* South American commission for the fight against foot and mouth disease
- COPAIA *Comisión Panamericana de Inocuidad de los Alimentos* Pan American commission for food safety
- INPPAZ *Instituto Panamericano de Protección de Alimentos y Zoonosis* Inter-American Institute for food protection and zoonoses
- NIH United States National Institutes of Health
- OAS Organization of American States
- PANAFTOSA Pan American Foot and Mouth Disease Center
- PHEFA *Plan Hemisférico de Erradicación de la Fiebre Aftosa* Hemispheric plan for the eradication of foot and mouth disease
- UNDP United Nations Development Program
- REDIPRA *Reunión de Directores de Programas Nacionales de Control de la Rabia en las Americas* Meeting of directors of national programs for rabies control in the Americas
- RIMSA *Reunión Interamericana a Nivel Ministerial en Salud y Agricultura* Inter-American meeting, at the ministerial level, on health and agriculture
- WHA World Health Assembly
- WHO World Health Organization.

## References

1. Arámbulo III P.V. 1991. Veterinary public health: perspectives at the threshold of the 21st century. *Rev Sci Tech*, **11** (1), 255-262.
2. Blood B. & Rodríguez T.R. 1951. Se establece el centro Panamericano anti-aftosa. *Turrialba*, **1** (6), 278-279.
3. Mello M.T. de A. 2004. Organização Pan-Americana da Saúde e a profissão médico-veterinária no Brasil. *Rev Bras Med Vet*, **26** (3), 109-112.
4. Pan American Foot and Mouth Disease Center (PANAFTOSA) 1995. International Technical Cooperation Agreement for the control and eradication of foot-and-mouth disease in the River Plate Basin: accomplishments and expectations. PANAFTOSA, Rio de Janeiro, Brazil, 3-13.
5. Pan American Health Organization (PAHO) 1996. Informe final del grupo externo de trabajo para asesorar al Director OSP sobre el programa de salud pública veterinaria. PAHO, Washington, DC, 24 pp.
6. Pan American Health Organization (PAHO) 2003. Quincuagésimo cuarto aniversario del programa de salud pública veterinaria (1948-2002). El aporte de las ciencias veterinarias a la salud pública en el ámbito de la Organización Panamericana de la Salud. PAHO, Washington, DC, 89 pp ([www.col.ops-oms.org/docs/aportessaludpubvet.pdf](http://www.col.ops-oms.org/docs/aportessaludpubvet.pdf) accessed on 27 October 2007).
7. World Health Organization (WHO) 2002. Future trends in veterinary public health. Report of a WHO study group. Technical Report Series No. 907. WHO, Geneva, 85 pp ([whqlibdoc.who.int/trs/WHO\\_TRS\\_907.pdf](http://whqlibdoc.who.int/trs/WHO_TRS_907.pdf) accessed on 27 October 2007).