

“Experiences and Areas of Interest for Strengthening Antimicrobial Resistance Networks”

Regional Seminar Report

From 5 to 7 June 2019 the above seminar was held in the premises of the Science Cultural Centre located in the Technological Scientific Pole of the City of Buenos Aires, with excellent results in terms of attendance, subjects covered and impact on the Argentine, regional and global networks and groups that work on this subject.

BACKGROUND

This seminar was held in the context of the Joint Programming Initiative on Antimicrobial Resistance (JPIAMR) of which the Secretariat of Government for Science, Technology and Productive Innovation (SGCTeIP) is a member.

The JPIAMR is a global alliance that receives European funding, and its Secretariat is located in Sweden. The European Commission approved the EXEDRA project under the European Framework Programme for Science and Research "Horizon 2020". As a Coordination and Support Action, EXEDRA provided financial support to carry out the regional seminar, in line with the activities undertaken by Argentina as a partner beneficiary.

Likewise, the seminar follows up on the last Latin American workshop in which JPIAMR was involved, which was held in Santiago, Chile, in October 2017.

The *Argentine National Commission for the Control of Antimicrobial Resistance (Co.Na.Cra)*¹ provided its invaluable support. Co.Na.Cra membership includes the SGCTeIP, together with the Secretariat of Health, Secretariat of Agriculture, Secretariat of Environment and other technical bodies, such as CONICET, SENASA, INTA, ANLIS, ANMAT, among others. The CO.NA.CRA. played a crucial role in selecting themes, identifying speakers and supervising this activity.

RATIONALE

Antibiotic Resistance is a pressing problem worldwide and – as it affects both human & animal health and the environment at the same time – the organizations that attended this seminar mostly address it by applying the “ONE HEALTH” approach. Accordingly, experts from each area involved and specialists from a number of South American countries were asked to participate to ensure a broad view of the regional situation and to share challenges, experiences and lessons learned and understand the strengths of the region. The researchers' viewpoint was also taken into account, without neglecting

¹It started working in 2015 under the coordination of the National Epidemiology Directorate of the Secretariat of Government for Health, headed by Dr. Patricia Angeleri.

those who implement health plans and government regulators. Food producers were also considered and enriched the dialogue with the government bodies, supervisory agencies and private sector players.

With this perspective as a guideline, the following specific goals were identified:

- *To present the AMR status in Argentina and the region based on the “One Health” approach to exchange experiences and detect challenges currently prevailing in the region.*
- *To provide a space to generate exchanges between research groups, leading health institutions, regulators, productive sector, consumers, among others.*
- *The goals of the Joint Programming Initiative on Antimicrobial Resistance - JPIAMR - and international financing opportunities will also be presented.*

NEXT STEPS AND ACTIVITIES

- **Information sessions (INFODAYS) will be held throughout the year for researchers and other stakeholders about JPIAMR and H2020 calls on this subject that are open to third countries.**
 - **In line with the conversations held between producers and other AMR players, further joint meetings and activities will be held to identify the problems faced by everyone on this issue.**
 - **We will participate in all AMR dissemination and awareness activities through the available internal and external channels. Likewise, world awareness days, such as the World Microbiome Day on 27 June, will be taken advantage of by publishing posts and articles on AMR.**
 - **Joint activities with other areas of government will be planned, to present AMR efforts in dissemination fairs with great geographic coverage, such as TECNÓPOLIS and TECNÓPOLIS FEDERAL, and other activities achieved through the Linkage area.**
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Annex 1 - Summary of Panellists' Presentations in the Visibility Workshop

FIRST DAY - 5 June

Institutional Opening

By the Undersecretary of Institutional Evaluation, Lucas Luchilo, the Head of Cooperation of the European Commission Delegation in Buenos Aires, Mr. Luca Pierantoni, and the government-appointed manager of ANLIS, Dr. Claudia Perandones, who talked about the appropriateness of holding this seminar in Buenos Aires and wished success for the next days.

In her presentation, Dr. Perandones presented the valuable and extensive experience acquired by ANLIS through its laboratories both at national and regional level.

Panel 1.1 - Introduction to the Current Situation of Antimicrobial Resistance

The current global situation of antimicrobial resistance was described by Laura Marin, Coordinator of the General Secretariat of the Joint Programming Initiative on Antimicrobial Resistance (JPIAMR). After her participation, Dr. Patricia Angeleri discussed the current status of the Argentine National Action Plan, in her capacity as head of the National Commission for the Control of Antimicrobial Resistance (Co.Na.Cra).

The next speaker, Dr. Marcelo Galas, was substituted by Dr. Pilar Ramon-Pardo, current Coordinator of the Special Antimicrobial Resistance Programme of the Pan American Health Organization (PAHO) - World Health Organization (WHO) - who delivered a remote presentation (via Skype) on the situation in the Americas and urged the participation and interconnection of the different players to deal with the problem.

Panel 1.2 - Institutional and National Epidemiological Networks

With Patricia Angeleri as moderator, this panel addressed the institutional and national epidemiological networks. Dr. Celeste Lucero, from the Antimicrobial Service of the National Institute of Infectious Diseases (INEI-ANLIS) "Dr. Carlos G Malbrán" talked about surveillance in human health., Dr. Lisandro Ruiz and Federico Luna from SENASA - National Service for Agri-Food Health and Quality, spoke about the national surveillance of antimicrobial resistance in animals for consumption and the two-year experience of programme execution.

Afterwards, Dr. Gabriela Gutiérrez, Researcher at CONICET, talked about the role of the microbiota in health and the impact of antibiotic use.

Panel 1.3 - Experiences in Latin America

The day continued with experiences in Latin America. Dr. Miryan Falcón, from the Central Public Health Laboratory of Asunción in Paraguay, talked about antimicrobial resistance in her country. She was followed by Dr. Rafael Vignoli, from the Department of Bacteriology and Virology at the School of Medicine of the University of the Republic in Uruguay, who presented an interesting report on antimicrobial resistance in food production chains, portraying the work of the different research groups in that country.

Panel 1.4 - Challenges and Opportunities from a One Health Perspective

After the lunch break and moderated by Federico Luna, this panel began with the participation of Dr. Mariano Fernandez Miyakawa, from the Institute of Pathobiology Research of the National Institute of Agricultural Technology (INTA), who described the changes in the use of antibiotic growth promoters and their connection with AMR. When explaining the process of change both in Europe and the United States, he mentioned that our country is working on viable alternatives.

Next, Dr. Alejandro Petroni, of the Antimicrobial Service of the National Institute of Infectious Diseases (INEI-ANLIS) referred to the current state of the propagation of Antimicrobial Resistance genes and reported on the work progress made by that service and its research team.

In the same line and as a first perspective from the production sectors (pigs in this case), the Pig Production and Project Consultant Veterinarian Daniel Griva talked of the experience in reducing antimicrobial use in intensive production settings and how this work has been successful in pig farms.

Then, Dr. María Cecilia Rodríguez, from the Reference Centre for Lactobacilli in Tucumán, talked about the role of probiotics in infection prevention in humans and animals as an alternative to antibiotic use.

Panel 1.5 - Regulation of Antimicrobial Use of in Human and Animal Health

In this panel Dr. Norma Belixan, from the National Administration of Medicines, Food and Medical Technology (ANMAT), looked into the regulation of antimicrobial use in human and animal health, and informed about the regulatory status of antimicrobial use in human health and the challenges faced by the sector. Subsequently, Dr. Lisandro Ruiz and Dr. Federico Luna, of the National Service for Agri-Food Health and Quality (SENASA), discussed this subject but in relation to animal health.

Panel 1.6 - Perspective of Producer Associations

This roundtable was intended to show the concerns and challenges of producers on this issue. The experience in eliminating antibiotic use in animal feed and its substitution with plant extracts was described by Claudio Farabola, CEO of the EuroChamber and the Italian-Argentine Chamber, and Claudio Cabral, Technical Head of a meat food production company.

In turn, the strategic vision region on sustainable meat and the elimination of antibiotic use for Argentina and the Latin American was provided by Josefina Eisele, Head of the Argentine Roundtable for Sustainable Beef and Director for Latin American of the Global Roundtable for Sustainable Beef. Together with Juan Luis Uccelli, of the Argentine Association of Pork Producers, she contributed to the discussion of the problems that affect production, including compliance with the directions from regulatory agencies, perceiving changes in consumers' demands and meeting foreign market access requirements.

SECOND DAY - 6 June

On this day, a field visit was made to the headquarters of the National Administration of Health Laboratories and Institutes (ANLIS) “Dr. Carlos G. Malbrán”². Twenty-eight (28) national and foreign experts participated and were warmly received by the organization and especially by Dr. Perandones, the government-appointed manager of the organization, who described the different institutes that currently make up ANLIS³ and briefly explained the research activities carried out by each one.

After the introduction by Dr. Perandones, the BSL2 Biological Safety Laboratories, the Biorepository and the Argentine Population Genomic Biobank were visited, followed by the National Institute of Infectious Diseases (INEI). In all these locations, experts from staff of each of the departments explained the activities they perform and the equipment they have, they also clarified that they provide services all over the country.

THIRD DAY - 7 June

Panel 3.1 - AMR and its Impact on the Environment: Water as a Vehicle for AMR Dissemination

The first item in the agenda was to present water as a vehicle for resistance propagation. In this line, Dr. Luis Merino, from the School of Medicine, National University of the Northeast (UNNE), Corrientes, talked about his work on the subject. He explained that there are no international regulations on antibacterial resistance, that the work done varies from country to country and that this is reflected in the variety of papers on the subject. He also pointed out that there is little education about the risk of these chemicals for the environment; therefore the search for resistance should be standardized to see if it has impact on infectious diseases.

Dr. Daniela Centrón, from the Institute of Microbiology and Parasitology (IMPAM-CONICET), spoke about the flow of AMR mechanisms between the environment and the hospital setting. In her presentation she stressed that although hospital genes are known to impact on the environment, it is not yet understood how they work or if environmental genes can pass into hospital settings; thus further research is required.

²Organization under the purview of the Argentine Secretariat of Health that is in charge of scientific and technical policies connected with different substantive aspects of health actions in the public sphere. As a reference institution in the health sector, it develops and coordinates actions (at the three levels) to prevent morbidity and mortality from infectious, genetic-based and nutrition-based diseases. <http://www.anlis.gov.ar/>

³Namely, the National Institute of Epidemiology “Dr. Juan Héctor Jara” in Mar del Plata, the National Institute of Respiratory Diseases “Dr. Emilio Coni” in Santa Fe, the National Institute of Parasitology “Dr. Mario Fatała Chabén” in Buenos Aires, the National Center for Diagnosis and Research in Endemo-Epidemics in Buenos Aires, the National Center for Quality Control of Biologics in Buenos Aires, the National Institute of Infectious Diseases in Buenos Aires, the National Institute of Viral Human Diseases “Dr. Julio I. Maiztegui” in Pergamino, the National Center for Nutritional Research in the City of Salta, the National Center for Medical Genetics in Buenos Aires, the National Laboratory Network Center in Buenos Aires.

Panel 3.2 -Presentation of Coordination Experiences between Latin American Agencies

Next came presentations of coordination experiences between Latin America agencies, starting with Chilean cases involving the environment as described by Dr. Jorge Olivares of the Antibiotic Resistance in Pathogenic and Environmental Bacteria Group - Biology Institute, Pontificia Universidad Católica de Valparaíso, Chile in his presentation “Understanding the antimicrobial resistance phenomenon between the clinical-environmental-veterinary interface: Tracking the Environmental resistome”. Afterwards, Dr. Juan Carlos Hormazábal Opazo, from the Under-Department of Infectious Diseases, of the National Reference Biomedical Department, presented the situation of the laboratories in that country. The next speaker was Dr. José Munita, Associate Professor, Infectious Diseases, Genomics and Resistant Microbes Group (GeRM), Clínica Alemana, Universidad del Desarrollo.

Then, Dr. Nilton Lincopan, came from the University of São Paulo, Brazil, to speak about the Brazilian situation and particularly about clones and bacterial resistomes with high public health risk circulating in the human-environment-animal interface.

Dr. Rodolfo Quirós closed this international block with a description of the experience in Santa Cruz de la Sierra, Bolivia, and presented in the detail the “Guide for the implementation of an antimicrobial optimization program (PROA) at hospital level”, a programme in which nearly all the countries of Latin America participate. He also commented that the highest concentration of exposure bacteria is found in the hospital setting, which is a major problem, and that resistant germs move from hospitalized patients to other risk settings, such as nursing homes, so that the focus should not be limited to hospitals.

Panel 3.3 - RAM and Human Health Issues

As an added value, the Argentine Infectious Disease Society - SADI, with the participation of Dr. Ángel Colque, Coordinator of the HAI Commission of that organization, talked about HAI prevention as a pillar in the fight against MR. Afterwards, Dr. María José López Furst, Infectious Physician-Chief of the Infection Control Section, Private Hospital Dr. Julio Méndez, and Coordinator of the Committee on the Adequate Use of Resources, SADI, talked about Strategies to Control AMR in Daily Medical Care: Adequate Antimicrobial Use.

Dr. Gabriel Gutkind, from the School of Pharmacy and Biochemistry of the University of Buenos Aires, explained the impact of AMR on Human Health from the perspective of on-going research.

Panel 3.4- By Way of Closing

Catherina Dhooge, International Cooperation, National Scientific and Technical Research Council (CONICET), informed about the initiatives funded by that organization, particularly the work done in Networks and the recent AMR call with the United Kingdom.

Laura Marin, Coordinator of the General Secretariat of the Joint Programming Initiative on Antimicrobial Resistance (JPIAMR) highlighted how important the seminar had been, and was pleasantly surprised by the work conducted by the different institutions, existing networks and CONACRA. She encouraged the different players to participate in the calls that will be opened in the near future, such as the one on Surveillance, scheduled to open in November, as this is a cross-cutting issue.



Federico Luna on behalf of the National Commission for the Control of Antimicrobial Resistance (Co.Na.Cra) thanked the attendees for their presence, considered that major joint actions can be taken from the communicational point of view and encouraged institutions to continue cooperating among them to further fight against AMR.

Annex 2 - Links and Press Information of the Liaison Office of Argentina - European Union related to the AMR Seminar and Activities for the 20 Years of Argentina - European Union Cooperation



http://www.oficinadeenlace.mincyt.gob.ar/index.php?option=com_content&view=article&id=381%3Afinalizo-una-semana-exitosa-de-actividades-en-el-marco-de-los-20-years-of-cooperation-between-Argentina-and-the-European-union-in-science-and-technology&catid=1%3Anoticias&Itemid=322&lang=en

Annex 3 - AMR Regional Seminar Agenda for Download



https://www.jpiamr.eu/wp-content/uploads/2019/06/JPIAMR-Regional-Workshop-Argentina-5-7-June-2019_Agenda.pdf

Annex 4- Photo Record of the Regional Seminar



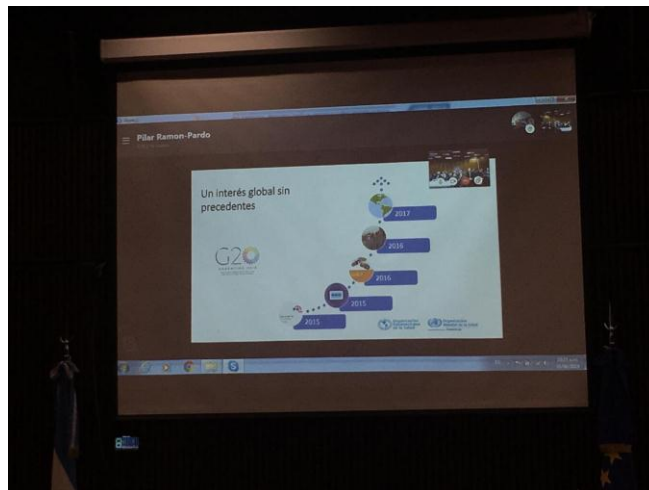
Seminar opening with the presence of the Head of Cooperation of the European Union Delegation in Argentina, Mr. Luca Pierantoni, and the Under-Secretary of Institutional Evaluation of the Secretariat of Government for Science, Technology and Productive Innovation, Mr. Lucas Luchilo



Laura Marin, JPIAMR representative, together with Claudia Perandones, government-appointed manager of ANLIS, Luca Pierantoni, Head of Cooperation of the European Union Delegation in Argentina, Patricia Angeleri, leader of the Co.Na.Cra. and Alejandra Davidziuk, Coordinator of the Liaison Office Argentina - European Union



A large audience of about 100 people attended each plenary session



The VC presentation by Dr. Pilar Ramón-Pardo, AMR expert from the World Health Organization-WHO / Pan American Health Organization-PAHO, describing the situation in the continent



The ANLIS government-appointed manager, Claudia Perandones, talks about the work done by the National Laboratory Network and the Malbrán Institute as an AMR reference laboratory for Argentina and the region



Norma Belixan, from ANMAT, the drug governing body, speaking during the Seminar



Federico Luna, expert in AMR from the National Service for Agri-Food Health and Quality, together with Mariano Fernández Miyakawa, of the National Institute of Agricultural Technology, jointly moderated a block on AMR and animal health and foods



Field visit by foreign and national attendees



Visit to the premises of ANLIS and Laboratories of the Malbrán Institute



Seminar closure with Laura Marin for JPIAMR, Federico Luna for Co.Na.Cra. and Catherina Dhooge for CONICET