New Concept Note – Building Competence in Antimicrobial Resistance Surveillance Methodologies

Purpose: Consideration
Submitted by: Chile
# APEC Concept Note

## Project Title:
Building Competence in Antimicrobial Resistance Surveillance Methodologies

## Fund Source (Select one):
- [ ] General Project Account (formerly Operational Account)
- [ ] TILF Special Account
- [x] APEC Support Fund

For ASF: As per Guidebook Ch. 3, list ASF Sub-fund if appropriate for this project:

## APEC forum:
Sub-Committee on Standards and Conformance SCSC

## Proposing APEC economy:
Chile

## Co-sponsoring APEC economies:
Australia, Japan, Mexico, Papua New Guinea, Peru, The Philippines, Thailand, The United States

## Expected start date:
June 2017

## Expected completion date:
June 2018

### Project summary:
Describe the project in under 150 words. Your summary should include the project topic, planned activities, timing and location:

(Summary must be no longer than the box provided. Cover sheet must fit on one page)

In support of APEC’s 2014 Rank 1 priority of promoting regional economic integration via free and open trade and investment through standards, conformity assessment, technical regulation and regulatory cooperation, Chile is seeking APEC funding to conduct a workshop for building competence in Antimicrobial Resistance (AMR) surveillance methodologies. The activity will focus on encouraging APEC economies to participate actively in actions against AMR through the implementation of laboratory techniques to measure the susceptibility to antibiotics in a harmonized and standardized way and strengthen integrated surveillance of AMR present in microbial strains isolated from animals, environment and food. A three day workshop will be held in Santiago Chile. Participants from APEC economies would be able to increase their knowledge in laboratory techniques for antibiotic susceptibility measure and the importance of use standardized method. They will participate in demonstrative laboratory training modules. The outcome of this workshop will include technical information open for all APEC members.

### Total cost of proposal:
(APEC funding + self-funding):
USD 169,500

### Total amount being sought from APEC (USD):
149,500

**By category:**
- Travel: 129,500
- Labor costs: 6,000
- Hosting: 13,000
- Publication & distribution: 1,000
- Other: none

(See Guidebook on APEC Projects, Ch. 9 to ensure all proposed costs are allowable.)

### Project Overseer Information and Declaration:

**Name:** Javiera Cornejo  **Title:** Professor, Preventive Medicine Department FAVET  **Organization:** Faculty of Veterinary Science University of Chile (FAVET)

Postal **address:** Av. Santa Rosa 11735, La Pintana

Santiago Chile.  **Tel:** +56229785506  **E-mail:** jacornej@uchile.cl

**Name:** Constanza Vergara  **Title:** Veterinary Advisor  **Organization:** Chilean Food Safety and Quality Agency (ACHIPIA)

Postal **address:** Nueva York 17, 4th floor, Santiago Chile.  **Tel:** +56227979900  **E-mail:** constanza.vergara@achipia.gob.cl

As Project Overseer and on behalf of the above said Organization, I declare that this submission was prepared in accordance with the Guidebook on APEC Projects and any ensuing project will comply with said Guidebook. Failure to do so may result in the BMC denying or revoking funding and/or project approval. I understand that any funds approved are granted on the basis of the information in the document’s budget table, in the case of any inconsistencies within the document.

Javiera Cornejo / Constanza Vergara

**Date:** 03/Feb/2017


Project Synopsis

1. **Relevance – Benefits to region:** The present proposal is in agreement with the 1994 Leaders’ Declaration at Bogor, Indonesia pointing the APEC commitment to achieve sustainable and equitable growth and reduce economic disparities for the well-being of the people, also with the FSCF mandated (2007) to develop a more robust approach to strengthening food safety standards and practices in the region. Recently, Bali 2013 declaration enhance the importance of the APEC economies engage in capacity building efforts and effective regional and global partnerships across the public and private sectors with the aim of addressing emerging infectious diseases and strengthening public health systems; in alignment with the need to work on combating infectious diseases. On these regard, one issue of special concern now days for public health for all the economies is the emergence of antimicrobial resistance (AMR), associated to food animal productions. According to WHO (2011) AMR is a major public health problem because of its severe adverse consequences, threatening infectious disease control, causing the re-emergence of some pathogens or increasing their virulence, making medical treatments more costly. These consequences affect human and animal health and contribute to environmental pollution with waste and resistant microorganisms, impacting negatively in the emerging economies’ development and the food security of the nations. Considering these in 2015 Chile successfully implemented under the SCSC/FSCF the project CTI 25 2014A Coordinated Research Initiative for the Implementation of Antimicrobial Resistance Control Strategies. A workshop was held in October 2015 in Chile, in order to lay the foundations and economies’ needs for establishing a Resistance Surveillance System in the short term. Awareness about the AMR issue and the importance of generating integrated surveillance systems was raised during the project. Among the main difficulties that exist in the economies to implement an integrated AMR surveillance program and the actions that should be taken to accomplish this, a lack of harmonized methodology and expertise of human resources was raised as a concern. Also, the project showed up that currently, there are many differences in management and in the actions taken by the different APEC economies around this issue. These can be evidenced by the different approach towards the implementation of resistance surveillance systems of each economy. The fact that some APEC economies have already implemented resistance surveillance and monitoring systems and other economies do not have clear policies about this issue yet, increases regulatory burden, especially for small and medium food producers, and creates differences in standards and technical regulations, affecting open trade and the regional commercial flow of food. Therefore, the lack of regional integration on this issue has the potential to impact the availability of safe food products for the population. In order for APEC to continue to facilitate free flow of traded food products, contributing to regional economic growth and integration of the economies, and support of food safety and food security practices in the region, APEC member economies must align and improve systems for surveillance and monitoring of AMR. These, will generate base line reports and scientific information concerning AMR in human, animals and environment in order to control the spread of the resistance bacteria and minimize its adverse effects. In order to establish an integrated surveillance system in AMR of animal, human and environmental origin, and take decisions at a policy maker level, reliable data that can be compared in time and between laboratories are mandatory. To achieve this goal it is essential to harmonize the protocols used for identification and differentiation of each bacterial genus and for the origin, because among the APEC economies laboratories different protocols are used in the whole process from sampling, isolation, identification of strains. The interpretation of the results may differ, which ultimately leads to establish criteria for the interpretation of the results. Harmonizing criteria in susceptibility testing of antibiotics have been made by institutions as the Clinical and Laboratory Standards Institute (CLSI: www.clsi.org), which develop guidelines for standardization of techniques of analysis of antimicrobial susceptibility. Considering this, the present proposal aims to build competence in AMR Surveillance Methodologies, among the APEC economies in order to walk towards the implementation of inter-economy control strategies. It is in alignment with WHO Global Action Plan on AMR, Objective 2 “Strengthen the knowledge and evidence base through surveillance and research”. WHO, OIE and FAO will be included, and the Integrated Surveillance of Antimicrobial Resistance of WHO-AGISAR 2013 will be used as background and context for workshop. The present proposal fall under APEC Rank 1, promoting regional economic integration via free and open trade and investment: Supporting the Multilateral Trading System and the Bogor Goals; Food production, processing, supply chain and trade, including food safety and security, sustainable agriculture, sustainability of these activities and rural development, technical cooperation and new technologies.; Human capital development, including implementation of the Strategic Plan on Capacity Building to Promote the Trade and Investment Agenda, cooperation on education, skills development, science and technology and capacity building. ; Standards, conformity assessment, technical regulations, regulatory cooperation, and regulatory coherence, including good regulatory practices. Also is linked to APEC Rank 2 support the APEC Strategy for Strengthening Quality Growth, including sustainable and inclusive growth.

2. **Objectives:** The project has the following objectives:
1. To disseminate the importance of monitoring antimicrobial resistance in participating APEC economies through increasing knowledge in laboratory techniques of detecting antibiotics susceptibility. 2. To create a framework to encourage APEC economies to participate actively in actions against antimicrobial resistance through the implementation of harmonized laboratory techniques to measure the susceptibility to antibiotics in a harmonized and standardized way. 3. To strengthen integrated surveillance of antimicrobial resistance among...
APEC economies through building capacity in laboratory techniques and the interpretation and analysis of the surveillance results.

3. **Alignment – APEC**: This project supports APEC’s 2016 Rank 1 priority of promoting regional economic integration via free and open trade and investment by regulatory and technical cooperation in the area of building capacities AMR surveillance techniques. **Regulatory Cooperation**: The workshop will bring together members from APEC member economies and seek to promote a scientific approach to align regulatory frameworks for addressing issues related to AMR surveillance. Standards and Technical Regulation Alignment: Standardization of knowledge in laboratory techniques for establishing surveillance and monitoring programs, and harmonize the policy making. **Strengthening the Multilateral Trading System and improving access to global markets**: The FSCF is mandated to strengthening food safety standards and practices in the region. The FSCF PTIN has identified Laboratory Capacity and Food Safety Regulatory Systems as priority areas for capacity building. This project supports these priorities as it aims to increase capacity building to improve technical competence in AMR surveillance techniques. **Alignment – Forum**: The project is in alignment with the SCSC work plan regarding that harmonized standards and conformance procedures improve the efficiency of production and facilitate international trade, resulting in more rapid trade flows, reduced costs and greater integration of production networks. Among the SCSC current activities this proposal is linked to the Food Safety work of this forum, aiming for building laboratory testing capacity for antimicrobial resistance in the region.

4. **Methodology**: 

   **Workplan**: **Timeline**: June 2017 – June 2018

   - **2nd quarter of 2018**: Workshop Report preparation and publication

   - **2nd quarter of 2018**: workshop Report preparation and publication. A three day international workshop will be held in Santiago Chile in April 2018 with the technical collaboration of the Chilean Public Health Institute, where the participants from APEC economies would be able to increase their knowledge in laboratory techniques for antibiotic susceptibility measurement and the importance of using standardized method, then they will participate in several demonstrative laboratory training modules. All the classes and technical information will be available on a web page that will be created for this purpose and to which all stakeholders can access during and after the workshop.

   **Beneficiaries and Stakeholders**: Project participants should have technical knowledge regarding the AMR. Researchers and Technical staff involved in Government Programs and Institutions which are implicated in Antimicrobial Resistance Monitoring from APEC economies would be invited to attend the workshop on Building Methodology Competence in Antimicrobial Resistance Surveillance. The level of expertise in the subject of the representatives must be such as to enable them to understand the issues to be discussed and the laboratory training activities.

   **Evaluation**: The progress and impact of the project will be assessed by different indicators.

   1. **Number of economies who answer the pre workshop survey “Assessment of the experience in the implementation of the final recommendations and conclusions of the APEC project “Coordination Research Initiative for implementation of Antimicrobial Resistance Strategies”:** A survey to measure the status and experience of APEC economies in the implementation of the final recommendations concluded in the previous APEC project CTI 25 2014A will be sent to each economy. These responses will be used to organize round tables between economies in order to find collaborative solutions and working ties among the Region.

   2. **Number of workshop participants:** The number of participants to the workshop of different economies will be an indicator of success of the project and the impact of it. The project will promote women participation in attempt to find a balance between gender speakers as well as the participants according to the principles stated in the San Francisco Declaration endorsed by APEC Economic Leaders in 2011. So considering these facts, during all the development of the current project gender balance will be strongly encouraged through the proactively engagement of women in the different activities.

   3. **Number of economies responses to the Project Evaluation Survey:** Finally to assess the workshop effectiveness a “Project Evaluation Survey” will be requested to all workshop participants at the end of the activity. This survey will assess the relevance of the project for the participants, as well as the results, achievements and knowledge acquired form the workshop. This survey will also assess how the participants will apply the knowledge acquired in the workshop in their economies. The survey will also give the participants the chance to give opinions for future initiatives or suggest actions plans.

- **Linkages**: This initiative will bring together regulators and scientific Institutions, promoting an integrated based approach in Antimicrobial Resistance Monitoring. In 2015, we have the opportunity to start collaboration in this field in the APEC region through the APEC CTI 25 2014A Project “Coordination Research Initiative for implementation of Antimicrobial Resistance Strategies” which was the first step in this cooperation and capacity building activities where the objectives of enhancing awareness, strengthening technical competence and knowledge of government representatives were fulfilled. The main conclusion and final recommendations were to improve laboratory capacity and technical expertise, to harmonize methodology and improve the interpretation of data and finally create work ties with other APEC economies to share experiences and practices. Thus, this project wants to crate the framework for a collaborative work in the implementation of AMR monitoring techniques and results interpretation among APEC economies using demonstrative training
modules and lectures focused on Standardized Antibiotic Susceptibility measure laboratory techniques and results interpretation to be used in monitoring programs.