



Food and Agriculture
Organization of the
United Nations



World Health
Organization

FAO/WHO Joint Expert Meeting on Microbial Risk Assessment (JEMRA)

CALL FOR EXPERTS AND DATA ON MICROBIOLOGICAL RISK ASSESSMENT OF *LISTERIA MONOCYTOGENES* IN READY-TO-EAT (RTE) FOOD: ATTRIBUTION, CHARACTERIZATION AND MONITORING

FAO and WHO are looking to identify experts to contribute to the future work of JEMRA in the area of *Listeria monocytogenes* in ready-to-eat foods.

In addition, FAO and WHO are requesting governments, the industry, academia, consumer groups, laboratories, and any other interested organizations and individuals to submit any available data and information on attribution, characterization and monitoring of *Listeria monocytogenes* in ready-to-eat foods.

Background

In response to the request from Codex for scientific advice, FAO and WHO has undertaken the risk assessment on *Listeria monocytogenes* in several foods since 1999¹. The work started with fish products², and then focused on ready-to-eat (RTE) foods³. Risk assessments, previously developed at the national level, were adapted or expanded to address concerns in RTE foods at an international level. To support this work, the 2004 FAO/WHO risk assessment on *Listeria monocytogenes*^{4, 5} provided scientific insight into the risk characterization of *Listeria monocytogenes* contamination in food and the seriousness of listeriosis for susceptible populations. The technical report was limited to a cross-section of RTE foods; pasteurized milk, ice cream, cold-smoked fish and fermented meats, and the likelihood of these products as vehicles for human foodborne listeriosis.

¹ http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FMeetings%252FCX-712-32%252FAI01_13e.pdf

² <http://www.fao.org/3/x3018e/x3018e00.htm>

³ http://www.fao.org/fileadmin/templates/agns/pdf/jemra/SL00_en.pdf

⁴ <https://apps.who.int/iris/bitstream/handle/10665/42874/9241562617.pdf?sequence=1>

⁵ https://www.who.int/foodsafety/publications/mra_listeria/en/

Since then, outbreaks of listeriosis continue to occur across the globe, associated with previously reported and many previously unreported food vehicles, including fresh and minimally processed fruits and vegetables, sprouts, RTE meat products and frozen dairy products. Of particular importance, an outbreak in South Africa, in 2017, linked to RTE meat products caused 1,064 illnesses and 218 deaths (as of August 2018). This is the largest and deadliest outbreak of listeriosis recorded to date.

New tools are available to characterize isolates of *Listeria monocytogenes*. With these new developments in diagnostics and changes in the epidemiology of listeriosis outbreaks, the FAO/WHO JEMRA is undertaking new work on *Listeria monocytogenes* in RTE foods. New research findings and data representing the different food commodities and geographical regions will provide opportunities to validate the current risk assessment models for *Listeria monocytogenes*, assess their application to other food commodities and develop new management approaches to control *Listeria monocytogenes*.

This call for experts seeks to identify scientists who, in their individual capacity, can contribute to the successful completion of this task. In addition, we are also seeking data on the control of *Listeria monocytogenes* that can inform this advice. The purpose of expert consultation is to review and discuss the available data and background documents, to assess the need to modify and update (or develop new) risk assessment models/tools. Updated information will inform a range of risk management options in a number of different regions and a variety of products. Specifically, scientific advice is needed to provide the following:

- The global burden of disease attribution based on outbreak data, the dose-response and the susceptibility of the host, especially within vulnerable populations.
- Hazard identification and characterization of *Listeria monocytogenes*, including information on genetic profiles and virulence factors and mechanisms.
- Current monitoring and assurance programs including the status of the currently available methodology (commercially available and validated for regulatory purposes) for monitoring of *Listeria monocytogenes* in food and the production environment as basis for management and control.
- The development of a farm to fork risk assessment for *Listeria monocytogenes* contamination.

CALL FOR EXPERTS

The assessment of potential experts will start on: 20 January, 2020

FAO and WHO are currently in the process of identifying experts to participate in future work of FAO and WHO in the area of microbiological hazards associated with *Listeria monocytogenes* in foods. All applicants should meet the following general criteria:

- Advanced University/College degree in veterinary medicine, microbiology, food technology, food science, epidemiology, public health, or related fields
- Experience in food safety/risk analysis related to microbiological hazards in foods
- At least five years of experience in relevant fields
- Scientific publications in peer-reviewed journals, in particular, relevant publications within the most recent 10 years
- Good knowledge of the English language, both written and oral
- Evidence of leadership or invited participation in national or international scientific bodies, committees, and other expert advisory bodies pertinent to the scope of this work

Selection of experts

Applicants' curricula vitae (CV) will be reviewed based on the criteria listed above by a selection panel consisting of three or more individuals appointed by FAO or WHO. All qualified individuals will be notified and added to the JEMRA roster of experts that is valid for future work until 2022. A small number of accomplished individuals will be invited to participate in the proposed upcoming meeting which is planned for the fourth week of April 2020. Selected experts may be required to assist in the preparation of background papers and report drafts (in English). In selecting experts, FAO and WHO will consider, in addition to scientific and technical excellence, diversity and complementarities of scientific backgrounds, and balanced representation from geographic regions, including developing and developed countries, as well as gender. Unsuccessful candidates are not routinely notified.

Appointment of experts

Selected experts will be invited to contribute to the meeting only in their individual scientific capacity. An expert will not represent the government of country of which he or she is a citizen, or the institution with which he or she is associated. The experts designated will not receive any remuneration, however, where a physical expert meeting is held, travel costs, subsistence allowance and other related expenses will be the exclusive responsibility of FAO and WHO.

Applications

Interested applicants should submit their CV. The CV should include a description of education, relevant work experience, evidence of national or international expertise on the topic, including a list of peer-reviewed publications relevant to the factors indicated above (please do not include reprints in your submission unless specifically requested at a later date). Applicants must have a good working knowledge of English as correspondence and meetings will be in English only.

Before participating in any related activity, all the selected experts will be required to declare any potential interests associated with the subjects and substances that will be evaluated. Experts will be asked to indicate, in writing, all interests (financial and intellectual) on their part or that of their spouse that may affect, or be perceived to affect, their scientific independence as experts, including one or more of the following conditions: employment (past or present) by any commercial enterprise or private or civil sector association; receipt of research or other study grants from such enterprises or associations; shareholdings in commercial enterprises active in fields related to food safety.

Identification of an interest does not necessarily indicate a conflict nor automatically exclude an individual from participation. For example, as expert, it is expected that many, if not all, will be employed in some capacity related to the subject matter. These declarations must be completed and evaluated before a formal invitation will be issued. Declaration documents will be retained by the Joint Secretariat and a summary of declarations will be included in the report of the work. In addition, a confidentiality undertaking must also to be completed prior to appointment to ensure proper handling of dossiers and proprietary information.

Deadline

Please submit nominations and CVs at your earliest convenience, but no later than **20 January 2020**.

Data submissions in response to the call for experts should be sent to:

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CALL FOR DATA

Deadline: 29 February, 2020

FAO and WHO desire that all relevant information and data about *Listeria monocytogenes* in foods are considered in their assessment and are thus issuing this international call to raise awareness about data needs and invite all interested parties to provide any relevant information/data, particularly data that may not be readily available in the public domain.

Objectives

The data will serve as inputs to the development of scientific advice which will guide the elaboration of appropriate Codex texts. This call is aimed to obtain more globally representative data and information on monitoring programmes for *Listeria monocytogenes*.

The purpose of this project is to review and discuss the available data and background documents, to assess the need to modify and update (or develop new) risk assessment models/tools. Updated information will inform a range of risk management options in a number of different regions and a variety of products.

Request for relevant information

FAO and WHO want to ensure that all available and relevant information/data are collected, and are requesting governments, the food industry, academia, consumer groups, laboratories, health care providers and any other interested organizations and individuals to submit any available data from public health surveillance and assurance programs for *Listeria monocytogenes*. These data may be published or unpublished. Reference should be made to related published studies, where applicable.

FAO and WHO also recognize that countries may be at different levels in the development of their monitoring programs and testing methods for *Listeria monocytogenes* and welcome information on the status including challenges encountered.

Please submit the attached forms by 29 February 2020 with supporting documents in any format (electronic and/or hard copies - electronic submissions are preferred, either via e-mail (if not too large) or on USB keys), in any official United Nations (UN) language (English, French, Spanish, Arabic, Chinese, Russian), and with a title and short description of the content in English along with the list of data and information requirements if possible, to jemra@fao.org and jemra@who.int. If information is not available in official UN languages, a short summary of the nature of the data should be provided, preferably in English.

FAO and WHO would like to indicate that responses are expected from all the countries for this call since significant new information is requested.

List of data and information requirements

Data and information on the following aspects are requested:

A. Sampling plans and testing methods for monitoring of *Listeria monocytogenes*

- name of country
- name of the control programme (sampling/testing plan)
- food commodity
- step in the food chain (e.g. abattoir, processing, retail, etc).

- purpose of the testing (e.g. domestic market, testing of imported products, testing for exportation (indicate the country where the product is exported to), testing to determine national baseline prevalence, targeted exploratory etc.)
- regulatory testing – Testing programs can be mandatory i.e. imposed by the competent authorities or non-mandatory (ex. Industry own testing programs). For each testing program, please indicate if they are mandated by competent authorities or not, and for regulatory testing if they are implemented by the competent authorities or by industry
- laboratory method for screening/confirmation – Provide the laboratory method(s) for isolation and confirmation of *Listeria monocytogenes*
- analytical sample size – If available, provide the size (g or ml) of the analytical sample size
- number of samples per sampling period or per year – If available, provide number of the samples for each year or each sampling period (e.g. 1000 samples)
- microbiological criteria (if any)
- action taken on positive samples – Provide information on actions taken by competent authorities on positive samples for *Listeria monocytogenes* (e.g. recall, corrective actions, etc.)
- additional information website
- observations/challenges: any challenge in the design and implementation of your monitoring and testing programs for *Listeria monocytogenes*

B. Foodborne outbreak and surveillance data related to *Listeria monocytogenes*

1) Foodborne outbreaks data:

- time of year and month in which the outbreak occurred
- whether the outbreak / cases were confirmed or suspected regarding the link between the food vehicle and the outbreak of human cases and how this was determined (e.g. laboratory confirmation, epidemiological investigation, etc.)
- number of cases, hospitalizations, and deaths associated with the outbreaks
- age and sex distribution of cases (e.g. range and median)
- individual host susceptibility characteristics of cases (e.g. pregnancy, nutrition, health and medication status, concurrent infections, immune status and previous exposure history or any other risk factors identified)
- occurrence and number of secondary and tertiary transmission
- the implicated food (if identified) and attributes of the food that may have been relevant in the occurrence of the outbreak
- level of *Listeria monocytogenes* in the food attributed
- strains/serotypes of *Listeria monocytogenes* in the food attributed
- origin (e.g. local, imported) of the food attributed
- place of exposure
- other information
- relevant links (articles, reports, websites, etc)

2) Surveillance data on *Listeria monocytogenes* in foods:

- the implicated food and its attributes, if any
- place of origin of food attributed

- level of *Listeria monocytogenes* in the food attributed
- strains/serotypes of *Listeria monocytogenes* in the food attributed source and points of exposure
- other information
- relevant links (articles, reports, websites, etc)

C. Other studies

To update hazard identification and characterization of *Listeria monocytogenes*, recent studies about following information are requested. For examples:

- serotypes distribution
- virulence profiles (virulence genes and subtypes)
- genomic types including references to methodology used for typing
- genopathotype combinations
- validation studies
- dose-response assessment if performed on data
- antimicrobial resistance profiles

Data provider: Please provide name, title and full contact details of the contact person for follow-up and further details if needed.

Confidential and/or unpublished data

FAO and WHO recognize that some of the information and relevant data which are now required may be unpublished or of a confidential nature. With regard to unpublished information and data, this remains the property of the author for subsequent publication by the owner as original material. Unpublished confidential studies that are submitted will be safeguarded in so far as it is possible to do so without compromising the work of FAO and WHO. Specific issues relating to confidentiality should be discussed directly between the information and data owners and FAO/WHO. For these and other issues please contact FAO and WHO at the contacts provided.

Deadline

Please submit any relevant information electronically either via e-mail (if not too large) or on a USB stick, in any official United Nations language (English, French, Spanish, Arabic, Chinese, Russian), and with title and short description of the content in English, to the addresses below at your earliest convenience, but no later than **29 February 2020**.

Data submissions in response to the call for data should be sent to:

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