



**Food and Agriculture  
Organization of the  
United Nations**



**World Health  
Organization**

**Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment**

**(JEMRA)**

**CALL FOR EXPERTS AND DATA ON MICROBIOLOGICAL RISK ASSESSMENT OF VIRUSES IN FOODS**

FAO and WHO are looking to identify experts to contribute to the future work of JEMRA in the area of human enteric viruses in foods.

In addition, FAO and WHO are requesting governments, the industry, academia, consumer groups, laboratories, and any other interested organizations and individuals submit any available data and information to support this work.

**Background**

Based on the JEMRA meeting and its report<sup>1</sup>, Codex Alimentarius Commission established the Guidelines on the Application of General Principles of Food Hygiene to The Control of Viruses in Food (CXG 79-2012)<sup>2</sup>. The primary purpose of these guidelines is to provide direction on how to prevent or minimize the presence of human enteric viruses in foods, more specifically, HAV and NoV. This guideline is applicable to all foods, with a focus on ready-to-eat food, from primary production through to consumption, for the control of human enteric viruses. It also contains an annex on the Control of Hepatitis A Virus (HAV) and Norovirus (NoV) in Bivalve Molluscs (Annex I) and an annex on the Control of Hepatitis A Virus (HAV) and Norovirus (NoV) in Fresh Produce (Annex II). These annexes provide additional recommendations for control of these viruses in specific commodities.

With the new emerging issues associated with foodborne viruses and recent scientific developments, the Codex Committee on Food Hygiene (CCFH) requested that JEMRA provide scientific advice to inform the review of the guidelines at its 53rd session in 2022<sup>3</sup>. The following areas of the guidance were highlighted as needing updating:

- expansion of the scope to address viruses other than HAV and NoV and emerging vehicles of foodborne illnesses such as frozen fruits;

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<sup>1</sup> <https://www.fao.org/documents/card/en/c/e3e43092-6b31-5cf8-828f-2aa04bbabe99/>

<sup>2</sup> [https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fstandards%252FCXG%2B79-2012%252FCXG\\_079e.pdf](https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fstandards%252FCXG%2B79-2012%252FCXG_079e.pdf)

<sup>3</sup> [https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fmeetings%252FCX-712-53%252FReport%252FREP23\\_FHe.pdf](https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fmeetings%252FCX-712-53%252FReport%252FREP23_FHe.pdf)

- revision of interventions in the food chain focusing on process-specific control systems, surface disinfection as well as hand disinfection and food handler hygiene according to available evidence;
- possible inclusion of additional information on testing of foods for foodborne viruses taking into account technical advancements in viral detection in specific commodities and in assessing potential infectivity of viruses; and
- consideration of new scientific findings to control HAV and NoV in bivalve molluscs and in fresh produce made available since the publication of CXG 79-2012 including indicators to monitor seawater quality of molluscs growing areas and risk assessment models.

To support the update of the guidance, the CCFH requested JEMRA provide scientific advice on the following areas, giving priority to items 1, 3 and 4.

1. An up-to-date review of the foodborne viruses and relevant food commodities of highest public health concern;
2. a review of the scientific evidence on prevention and intervention measures and the efficacy of interventions in the food continuum;
3. a review of the analytical methods for relevant enteric viruses in food commodities;
4. a review of scientific evidence on the potential utility of viral indicators or other indicators of contamination; and
5. a review of the various risk assessment models with a view towards constructing more applicable models for wide use among member countries, including a simplified risk calculator.

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 viruses in food that can inform this advice. The purpose of the 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 epidemiological data.
- Hazard identification and characterization of viruses, including information on genetic profiles and virulence factors and mechanisms, the dose-response and the susceptibility of the host, especially within vulnerable populations.
- Current monitoring, including the status of the currently available analytical methods (available and validated for regulatory purposes) for monitoring of viruses in food and the production environment as basis for management and control.
- The development of the full farm-to-table risk assessment for viruses in foods.

## CALL FOR EXPERTS

**The review of applicants will begin on 3 April 2023 and continue until suitable candidates are identified.**

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 human enteric viruses in foods. All applicants should meet the following general criteria:

- Advanced University/College degree in virology, microbiology, veterinary medicine, food technology, food science, epidemiology, public health or related fields;
- Experience in food safety/risk assessment 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 last ten years;
- Good knowledge of the English language, both written and oral; and
- 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 may be notified and added to the JEMRA roster of experts that is valid for future work until 2027. 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

- 1) complete the online application at "<https://forms.office.com/e/ua12KEH5D3>", and
- 2) submit their curriculum vitae (CV) by email to FAO and WHO JEMRA Secretariat to the addresses below.

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 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 **3 April 2023**.

#### **CVs and data submission in response to the call for experts should be sent to:**

##### **Kang Zhou**

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Telephone: + 39 06 570 50319  
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##### **Akio Hasegawa**

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## **CALL FOR DATA**

**Deadline: 31 August, 2023**

FAO and WHO desire that all relevant information and data about human enteric viruses 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 human enteric viruses.

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 human enteric viruses. 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 human enteric viruses and welcome information on the status including challenges encountered.

Please submit by 31 August 2023 the 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](mailto:jemra@fao.org) and [jemra@who.int](mailto: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 human enteric viruses***

- 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 human enteric viruses
- 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), viral indicators or other indicators of contamination
- action taken on positive samples – Provide information on actions taken by competent authorities on positive samples for human enteric viruses (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 human enteric viruses

**B. Foodborne outbreak and surveillance data related to** human enteric viruses

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 human enteric viruses in the food attributed
- strains of enteric viruses 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 human enteric viruses in foods:

- the implicated food and its attributes, if any
- place of origin of food attributed
- level of human enteric viruses in the food attributed
- strains/serotypes of human enteric viruses 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 human enteric viruses, recent studies about following information are requested. For examples:

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

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 (Arabic, Chinese, English, French, Russian, Spanish), and with title and short description of the content in English, to the addresses below at your earliest convenience, but no later than **31 August 2023**.

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

#### **Kang Zhou**

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 Food and Agriculture Organization of the  
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