# SOUND control

COST Action CA17110

**COST Action: Standardizing output-based surveillance to control non-regulated diseases of cattle in the EU**

## Fourth Call For

# Short Term Scientific Missions

## and Virtual Mobility Grants

### February 2022 – September 2022

CONTENT

*Short Term Scientific Mission (STSM) and Virtual Mobility (VM) Grant in brief*

€ Travel grants for visiting a foreign research institution (STSM) or conducting research supported by a foreign expert at the home institution (VM Grant).

**Who?** Researchers (including PhD students and teachers) from countries participating in the SOUND control COST Action.

Conduct short scientific research under expert supervision. You can choose between 8 specified topics or submit your own proposal.

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## Call for STSMs and VM Grants

The COST Action CA17110 'Standardizing output-based surveillance to control non-regulated diseases of cattle in the EU' (SOUND control) encourages and supports exchange visits of researchers in a form of Short Term Scientific Mission (STSM) and Virtual Mobility (VM) Grants.

The STSMs and VM Grants are addressed to Early Career Investigators (ECI - an individual who is within a time span of up to 8 years from the date they obtained their PhD/doctorate), PhD candidates but also more experienced researchers are welcome. These grants are addressed to participants with a primary affiliation to an institution located in a country participating in SOUND control COST Action.

There are multiple STSMs and VM Grants to be awarded and conducted until September 2022. We invite you to apply for one of the proposed topics related to specific Working Group (WG) objectives or propose your research theme which is related to the SOUND control.

The STSM has to take place abroad (in another COST country) and the candidate should get in touch with a proposed hosting institution individually. However, we can help in searching for hosting possibilities amongst project partners.

### The deadline for applications is 31st January 2022.

Click here to read about experiences of previous STSM participants.

### What are STSMs?

STSMs are aimed at supporting individual mobility and at strengthening the existing networks and fostering collaborations by allowing scientists to visit an institution in another participating country.

STSMs in SOUND control should specifically contribute to the scientific objectives of the COST Action, whilst at the same time allowing those participating in the missions to learn new methodologies, gain access to specific data and/or methods not available in their own institutions/organisations.

### What are VM Grants?

Due to the COVID-19 pandemic there are travel restrictions preventing personal visits. Therefore, we are looking for candidates to conduct a virtual mobility with the same general objectives as the STSMs (box on the left). For which of the given topics you can apply for virtual mobility, you can see at the top left of each page where the topics are described (page 4–11).

# Topics for the STSMs and/or VM Grants

**WG2 | STSM**

## Application of a scenario tree model on data collected about EBL CPs

**Host Institution:**     Swedish Veterinary Institute (SVA), Uppsala, Sweden

**Supervisors:**          Jenny Frössling, Gerdien van Schaik/Céline Faverjon, Aurélien Madouasse/Elefterios Meletis

**Timeframe:**            At least 2 weeks, in the period January - March 2022

**Aim**:

Design a scenario tree model to estimate disease freedom from Enzootic Bovine Leucosis (EBL) in control programs (CPs) from several European countries.

**Short description:**

The applicant will spend time in the group of Dr. Jenny Frössling at the Swedish Veterinary Institute (SVA) to learn about designing scenario tree models to determine freedom from infection. The applicant will use the data collected in the previous STSM5 (Nov-Dec 2021). In STSM5 data were collected on EBL CPs in about 10 European countries. A scenario tree model for these CPs will be designed to estimate the probability of freedom from EBL in those CPs.

**Expected outcome:**

The applicant will write a report on the findings of the STSM. The results will be presented during one of the online meetings of the SOUND control WG2 and the final face-to-face meeting of SOUND control.

**WG3 | STSM**

## Application of the STOC free model to a cattle infectious disease

**Host Institution:**     To be decided

**Supervisors:**     To be decided

**Timeframe:**     At least three weeks in GP4, before June 2022.

**Aim**:

The STOC free model estimates herd level probabilities of infection from longitudinal test and risk factor data, when the infection is endemic. To date it has only been evaluated on bovine viral diarrhoea in cattle. The aim of this STSM, is to apply the STOC free model to estimate herd-level probabilities of infection, for a cattle disease other than BVDV.

**Short description:**

This STSM will be conducted at the institution hosting the surveillance data with help from WG3 leader and co-leader. The person recruited will apply the STOC free model, which is a Bayesian Hidden Markov Model that runs in R and Stan, to longitudinal surveillance data. Candidates should have working knowledge in R.

**The expected results:**

The grantee will write a report on the applicability of the STOC free model to a disease with different epidemiological characteristics and surveillance programme designs than BVDV; identify knowledge gaps and areas for model improvement. The results will be presented in online monthly meetings of WG3 and at the annual meeting of SOUND control.

**WG3 | STSM or VM Grant**

## Comparison of the scenario tree and STOC free method

**Host Institution:**        To be determined

**Supervisors:**        To be determined

**Timeframe:**        At least two weeks in GP4, between June and August 2022.


**Aim:**

Compare the scenario tree method and the STOC free model in terms of the contexts in which each one is suited, the required inputs and returned outputs.

**Short description:**

This VM will be conducted after two STSMs applying the scenario tree and STOC free methods are completed. The person recruited will use the results from these two previous STSMs. She/he will compare and evaluate the contexts in which each method can and should be used, describe the input data required such as test results, knowledge on test characteristics and critically evaluate the comparability of the method outputs.

**The expected results:**

The applicant will write a report comparing the two methods (due August 2022). The results will be presented in online monthly meetings of WG3 and at the annual meeting of SOUND control.

**WG4 | STSM or VM Grant**

### Finalizing bottom-up approach

**Host Institution:**     To be determined

**Supervisors:**     To be determined

**Timeframe:**     2–4 weeks between January 2022 and February 2022

**Aim**:

WG4 developed two strategies to engage stakeholders in their activities and collect relevant information to inform its research agenda. The bottom-up approach aims at understanding farmers' motivation and their decision making process regarding animal trade.

A questionnaire or guideline for focus group discussions or interviews is being prepared. The grantee should finalize it and apply it in a given country.

**Requirement:**

The grantee must have an interest in epidemiology, surveillance and questionnaire design.

**Expected outcome:**

The grantee will complete the development of the questionnaire/guideline for focus-groups/interviews. If time allows, the applicant should apply the developed approach in a given country.

**Expected deliverables:**

- • Questionnaire and guideline for the implementation of focus-groups or interviews;
- • Summary of results of the survey, focus-groups discussion or interviews.

**WG4 | STSM or VM Grant**

## Summarizing results of top-down and bottom-up approaches to better understand the trade processes within the EU

**Host Institution:**        To be determined

**Supervisor:**        To be determined

**Timeframe:**        2-4 weeks between March 2022 and July 2022

**Aim:**

To summarize the results obtained from the participating countries related to the application of a) the top-down approach; and b) bottom-up approach.

**Tasks:**

WG4 developed two strategies to engage stakeholders in their activities and collect relevant information to inform its research agenda:

*Top down approach* – aimed at understanding the cattle processes and the mechanisms used to stimulate or discourage trade between countries.

*Bottom-up approach* – aimed at understanding farmers' motivation and their decision making process regarding animal trade.

A questionnaire or guideline for focus group discussions or interviews was developed for each approach (bottom-up approach needs to be finalized). These approaches will be applied in various countries. Each grantee will summarize the results of a) the top-down approach; and b) the bottom-up approach.

**Requirement:**

The grantee must have an interest in epidemiology, surveillance and questionnaire design.

**Expected outcome:**

Compilation the results obtained in the participating countries. This should be handled as a manuscript draft.

**Expected deliverables:**

- Summary of results of the results obtained in the participating countries.

**WG4 | STSM**

## Collate gaps related to output-based surveillance from other projects (STOC-free, Hotline project, RiskSurv)

**Host Institution:**     Friedrich Loeffler Institute (FLI), Germany

**Supervisor**:     Carola Sauter-Louis

**Timeframe**:     Minimum of 2 weeks between January 2022 and June 2022

**Tasks:**

1- The grantee will conduct interviews with group leaders of previous and ongoing international projects investigating the application of output-based surveillance.

2- Based on the data collected during the interviews, the grantee will elaborate and organize a list and description of gaps (methodological, information, social, other) related to output-based surveillance

**Requirement:**

The grantee must have an interest in epidemiology and surveillance. Basic data analytical skills are required. The grantee must have a good level of English in order to be able to conduct the interviews.

**Expected outcome:**

The grantee will conduct the interviews and collect the data. These will focus on the gaps identified in other international projects related to output-based surveillance.

The results of this STSM should inform WG4 about gaps that should be taken into consideration when preparing a research agenda for output-based surveillance.

**WG4 | STSM**

## Review on the use of scenario-tree models for animal health surveillance purposes

**Host Institution:**      University of Thessaly, Greece

**Supervisor:**      Eleftherios Meletis

**Timeframe:**      Minimum of 2 weeks between February 2022 and May 2022

**Aim:**

Conclude literature review of the use of scenario-tree models in the veterinary field for surveillance purposes

**Tasks:**

1- The grantee will conduct the full text screening.

2- The grantee will finalize the data extraction tool.

3- The grantee will complete the data extraction.

**Requirement:**

The grantee must have a strong interest in epidemiology, surveillance, evidence based medicine and literature reviews.

**Expected outcome:**

A scoping review has been initiated to document the use of scenario tree models for surveillance purposes in the veterinary field. The grantee will lead the full text screening and data extraction processes.

The results of this STSM will serve as a basis for a scientific publication.

**Expected deliverables:**

• List of papers that will be included in the review;

• Tools for: a) full-text screening; b) data extraction;

• Table with extracted data from the selected papers.

**WG4 | VM Grant**

## Developing Theory of Change and research agenda

**Host Institution:**        To be determined

**Supervisors:**        To be determined

**Timeframe:**        To be determined

**Aim:**

Summarise the information collected in the various activities run by WG4 for the development of the Theory of Change model that shall inform the research agenda for the development and implementation of output-based surveillance for cattle.

**Tasks:**

The main deliverable of WG4 is a research agenda that outlines the needs for a successful development and implementation of output-based surveillance for cattle in Europe. Throughout the SOUND Control project, WG4 developed various activities to create a Theory of Change model that shall inform the abovementioned research agenda.

The grantee will compile the findings of WG4 activities to develop a Theory of Change model. Based on this model, the grantee shall draft a preliminary outline for the research agenda.

**Requirement:**

The grantee must have an interest in epidemiology and surveillance.

**Expected outcome:**

The grantee will summarize the findings to develop a Theory of Change model and draft a preliminary research agenda.

**Expected deliverables:**

- •     Report on the Theory of Change;

- •     Draft of the research agenda for the development and implementation of output-based surveillance for cattle in Europe.

## How to apply for an STSM or VM Grant

Interested researchers can apply by following the directions provided below.

1. All applicants must carefully read the funding rules detailed in Annex 2 Section 1.1 for STSM and VM Grants of annotated rules for COST Actions. This document is available at https://www.cost.eu/uploads/2021/10/COST-094-21-Annotated-Rules-for-COST-Actions-Level-C-2021-11-01-1.pdf
2. All applicants must register for an e-COST profile at https://e-services.cost.eu/
3. All applicants must obtain a letter of invitation from the Host institution confirming that they can undertake the STSM on the given dates before submitting an application.
4. All applicants must complete, submit and download their application online at https://e-services.cost.eu/stsm
5. All applicants must send their submitted application form and the relevant supporting documents to the Coordinator - jacinto.gomes@ipportalegre.pt - for evaluation before the application submission deadline expires.

The list of supporting documents to be submitted for the evaluation are:

- The submitted application form including the budget (downloadable when the online application is submitted - see point 4 above).
- A 1–2 A4 page motivation letter including an overview of the proposed activities that will be performed which must contain a plan of work for the visit/VM Grant highlighting the proposed contribution to the scientific objectives of SOUND control COST Action.
- C.V. including scientific degrees obtained (with dates), current position, previous work experience/positions, post-graduate courses and a list of academic publications – if applicable.
- Letter of invitation to the applicant from a senior Researcher affiliated to the Host institution (senior Researchers can be Associate Professor, Professor, Head of Department or equivalent).
- A letter of support from the Home Institution including any coverage of expenses not covered by the Grant during the planned STSM/VM Grant.

The applicant will be formally notified of the outcome of their STSM/VM Grant application by the Coordinator no more than 4 weeks after the application deadline.

## Who is eligible?

The STSM/VM Grant committee will evaluate the applications and select grantees based on the following criteria:

- Excellence of the written proposal.
- Geographical and gender balance issues are taken into consideration and ECIs will be privileged.
- Priority is given to applicants from inclusiveness target countries, but others will be considered as well.
- The country of origin and the host country must be members of the SOUND control network (not the host or origin institution).

The application will then be assessed by the formally delegated persons in the STSM/VM Grant committee and the Core Group against the perceived contribution that the proposed visit will make against the scientific objectives outlined in the Action's Memorandum of Understanding.

## Financial support

The financial support is a contribution to the costs and may not cover all costs.

For the STSM the financial support is limited to cover travel, accommodation and meal expenses and is paid in the form of a grant.

- A maximum of €3,000 in total can be afforded to the grantee within the SOUND control Action for the full STSM including travel expenses. In exceptional cases (when a longer STSM is planned of a few months) a candidate can apply for a higher amount (max. € 4,000).

For the VM Grant, the candidate can apply for a maximum of €1,500.

## After the STSM or VM

The grantee is required to submit a short scientific report to the host institution and to the Coordinator no later than 30 days after the end date of the STSM/VM Grant for approval.

The report should not be less than 5 pages long and include the following:

1. aims and objectives of the STSM
2. description of work undertaken
3. main results
4. future collaboration possibilities with the host institution
5. future plans, including potential future publications
6. Outputs produced (e.g. academic paper, funding application, new dataset etc.)

In addition, the grantee should provide the following:

- Letter from the host institution which confirms that the applicant has successfully completed the stay.

Failure to submit the scientific report within 30 days will effectively cancel the grant. The Coordinators Team is responsible for approving the scientific report and informing the Grant Holder that the STSM/VM has been successfully accomplished. After receipt of the approval by email, the Grant Holder will execute the payment of the grant.

Please note that 50% of the requested reimbursement can be paid on the first day of the STSM/VM. The final payment to the grantee will be done after the mission is over and the final report is submitted by the participant. Exceptions to this rule cannot be granted.

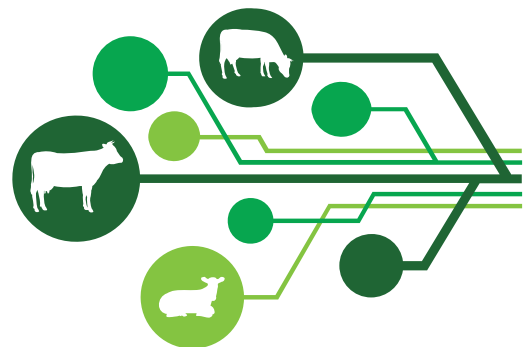The final report will be uploaded to the SOUND control webpage.

> For more general information on STSMs or VM Grants
> please contact the Coordinator
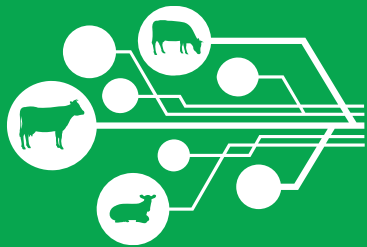> Jacinto Gomes - jacinto.gomes@ipportalegre.pt

## About SOUND control

## Background & objectives

SOUND control aims to harmonise the outputs from different European Member States (MS) Control Programmes (CPs) for non-regulated cattle diseases, such as bovine viral diarrhoea (BVDV), paratuberculosis, *Mycoplasma bovis* and salmonellosis. Several European countries have already implemented national or regional surveillance, control, or eradication programmes for these infections. These programmes bring tangible benefits to participating farmers, and the industry because of increased health and welfare and reduced antibiotic use, and reduced direct losses (e.g. increasing production, and reducing morbidity and mortality rates) and indirect losses (e.g. trade constrains) associated with the specific disease. Therefore, development and participation in CPs are to be strongly supported. However, these programmes also create difficulties for intra-community trade, as trade has the potential to introduce infectious agents into regions where disease freedom has been achieved. The difficulties relate to differences in disease status between countries, and the lack of agreed methodologies to assess and compare confidence of freedom among cattle that are being moved between countries and regions. Although for non-regulated diseases no regulations exist at European level, an understanding of equivalence with respect to disease freedom or more correctly termed 'freedom from infection' is important when seeking to facilitate interstate animal movements, whilst also managing the risk of infection.

# SOUND control

COST Action CA17110

## THE PROJECT

**SOUND control** brings together researchers that work in animal health surveillance, applied epidemiology, economics and sociology, stakeholders and policy makers from many different countries to discuss the requirements and demands for an output-based framework that enables objective and standardized comparison of disease control programmes.

# SCIENTIFIC WORK PLAN

The work is carried out in five working groups with the following tasks:

### WG1 - CHARACTERISTICS OF EXISTING CONTROL PROGRAMMES

Task: description of the current control programmes for non-regulated cattle diseases across member states.
Leader: Prof George Gunn
SRUC, United Kingdom

### WG2 - DATA REQUIREMENTS AND AVAILABILITY

Task: determination of data needs for an output-based framework and assessment of the available data.
Leader: Prof Gerdien van Schaik
Utrecht University, Netherlands

### WG3 - EVALUATION OF EXISTING METHODS

Task: assessment of the available mathematical and statistical methods for objective and standardized comparison of control measures.
Leader: Dr Aurélien Madouasse
INRA & Oniris, BIOEPAR, France

### WG4 - ADDRESSING THE KNOWLEDGE GAPS

Task: establishment of a joint research agenda focused on the development of methodologies for objective comparison of outputs from different input-based control programmes.
Leader: Dr John Berezowski
University of Bern, Switzerland

### WG5 - DISSEMINATION AND COMMUNICATION

Task: dissemination, communication and exploitation of the results of this project.
Leader: Dr Tanja Knific
University of Ljubljana, Slovenia