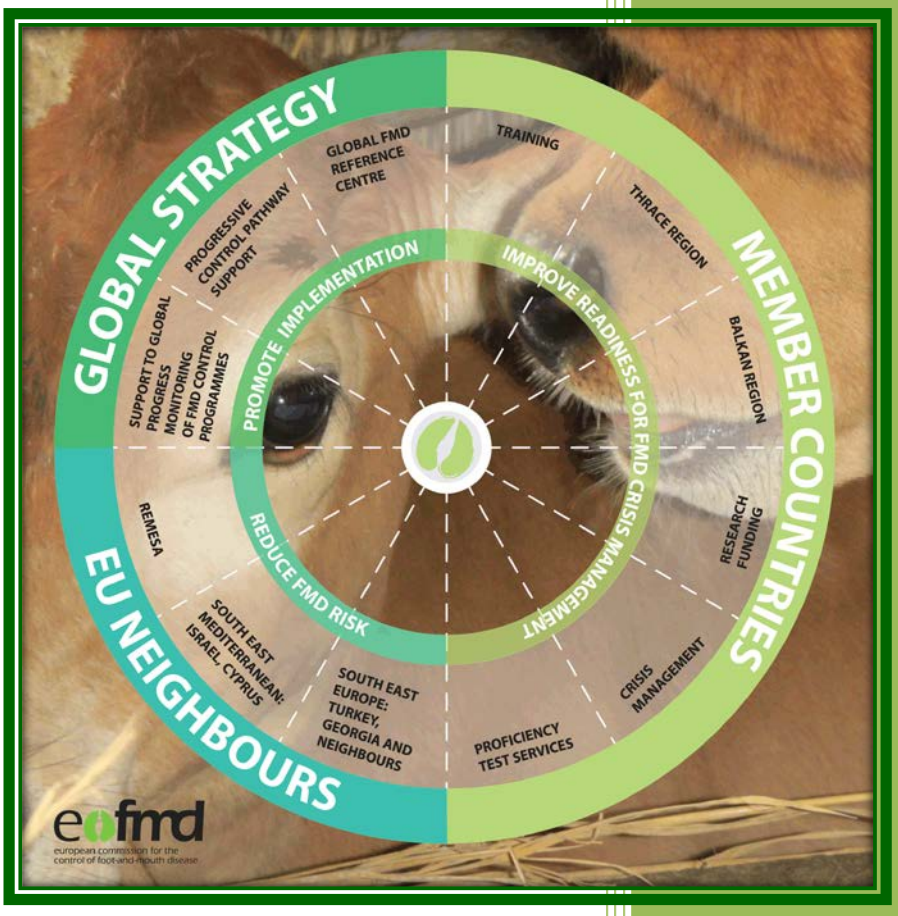
2017

EUFMD – Fund for Applied Research (EuFMD-FAR) - 2017



eufmd
european commission for the control of foot-and-mouth disease

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EuFMD Fund for Applied Research (EuFMD-FAR)

Fourth call

The EuFMD, under the multi-annual agreement with the European Commission (DG-SANTE), has since 2008 provided support for small applied research projects that are relevant to the technical issues that are seen as priorities of the EuFMD member states[1]. The thematic priorities have been mainly identified at the biennial General Sessions, held in 2009, 2011 and 2013, and 2015 and a specific Research fund was adopted as a component (1.5) of the 4 year, EC funded Workplan of the Commission. The list of previously supported research projects is given at the end of this section.

Funding

The EuFMD-FAR has earmarked funding of 500,000€ for the period to August 2019 under the Financial Agreement between EC and FAO relating to the EuFMD which is managed through the TF MTF/INT/003/EC. The current (at 2/2017) funding of the 4th call is modest and limited to a ceiling of 50,000 € per study/project, enabling some 5 grants to the maximum amount in 2017 , with a further call expected in late 2017 for disbursement in 2018-19. EuFMD-FAR is managed by the EuFMD Secretariat, advised by the Standing Technical Committee which acts as the Grant Review Board and a Referee Panel.

Schedule for calls for applications

	Funding available	Invitation to apply	Closing Date	Announcement of Results
4th Call	250,000 €	Feb 2017	17th March 2017	17th April 2017
5th Call	150,000€	November 2017	5th January 2018	5th February 2018
Further call (subject to disbudesement of calls 4 and 5)	100,000€	To be decided	<2 months after call	<1 month after application closing deadline

Context

The Strategic Plan of the EuFMD for the period 2015-19 has three Strategic Objectives (Pillars), which are:

1. To Improve readiness for FMD crisis management by Members;
2. To Reduce risk to Members from the FMD situation in the European neighbourhood (progressive control in neighbouring regions);
3. To Promote the global strategy of progressive control of FMD;

The operational objective of maintaining a mechanism for emergency response to an FMD crisis in the European neighbourhood will underpin the first two objectives. The Plan will be made operational through funding agreement for 2 years from the EC; the Action has 16 components , of which one is Applied Research.
EuFMD-FAR is placed under Pillar I for management purposes as the priorities for applied research identified during the 40th Session are primarily technical and economic issues affecting FMD emergency management in the member states, but applied research that supports Pillar 2 and 3 Objectives is also eligible for funding.
The Plan and the associated agreement with the EC indicate that the immediate beneficiaries of research findings and outputs are the Veterinary Services of the 38 countries which are members of the European Commission for

[1] Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Georgia, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Poland, Portugal, Romania, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, The Netherlands, Turkey, the United Kingdom.

the Control of Foot-and-Mouth Disease (EuFMD)[2], and their associated agencies and institutions that underpin their FMD management capacity. Other countries in the European neighbourhood that border to the members, where the situation of foot-and-mouth disease (FMD) creates a direct or indirect threat of introduction of the disease into one or more of the member countries of EuFMD, may be immediate beneficiaries of activities conducted to promote better management of FMD in those countries. The member states are also the final beneficiaries for the international actions to reduce the risk of FMD that are conducted through the Global FAO/OIE FMD Control Strategy and supported under the third Strategic Goal of the Action.

Thematic priorities 2015-17

Studies must show a high relevance to the strategic objectives. Innovation is encouraged, but results must also be tangible and there should be a good chance of uptake of the results within 1-3 years of completion. Grants are usually small, but enable short pieces of work that demonstrate the proof of concept or generate biologicals, results or methods that can be applied by MS or their agencies in their contingency plans (Pillar 1) or progressive control plans (Pillar 2-3) .

Strategic Objectives (Pillars) and areas of priority (2015-17)

The priorities in the bullet points are indicative but not exclusive. Interested parties can discuss ideas prior to proposal with the Secretariat or Members of the Standing Technical Committee. The applicant should declare this contact with the STC on the form.
In italics are those areas where one or more proposals were received in the first call and which were funded or are in advanced stage of discussion for a funding agreement.

In bold are priorities for the call.

Pillar I: To Improve readiness for FMD crisis management by Members

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Theme 1: Tools to assist modelling: focus on estimating confidence in disease freedom using post-outbreak surveillance in vaccinated populations

Intended application: To help countries estimate confidence in disease freedom following the occurrence of an FMD outbreak in a previously free country where vaccination-to-live as been used as a control tool.

Context: Following the recent discussions at the OIE FMD Ad Hoc group on the possibility of reducing the waiting period to recover FMD freedom to three months if vaccination to live is used, where vaccination effectiveness is demonstrated and an acceptable level of confidence in freedom is achieved through surveillance, there is a need to develop tools to help decision makers calculate how to go about this and how to calculate these estimates.

Theme 2: Impact calculators: extending these to estimate impacts of vaccination-to-live scenarios and business continuity planning

Intended application: To be used to explore the potential scale and impact of different FMD outbreaks in FMD-free European countries, and the influence of vaccination-to-live as a control strategy and other mitigation measures relating to business continuity on overall disease impact.

Context: This relates to requests from contingency planners for a form of impact calculator to assist them in communicating the risks of inadequate preparedness, the potential impact of an FMD outbreak and concerns

about both the potential benefits and costs of using vaccination-to-live as a control strategy. Such as impact calculator was developed under a previous call and is available for further refinement and adaptation.

The impacts of interest where a semi-quantitative calculation could assist include economic costs of control operations, the human and other resources needed over time in control, but also, if possible, wider impacts, such as the effects of stakeholder attitudes to products from vaccinated animals, supply chain issues, and consumer attitudes to the ethics of culling versus vaccination. The potential for business continuity planning to mitigate the wider impacts of an outbreak also need to be explored.

Pillar 2: To Reduce risk to Members from the FMD situation in the European neighbourhood (progressive control in neighbouring regions)

Theme 3: Tools to manage FMD in wildlife: issues highlighted by the requirement to prove freedom from disease of wildlife

Intended application: To carry out non-invasive sampling of wildlife for surveillance for FMD infection and to provide evidence for disease freedom

Context: Following outbreaks of FMD involving wild animals in Bulgaria (wild boar), Mauritius (issue of proving non-infection in deer), and sub-saharan Africa (wild ungulates including buffalo) there is a need to develop tools to help detect FMD circulation in wild animals and to provide evidence (if applicable) of disease freedom in these populations after the virus has ceased circulating, that do not require the killing or capture of wild species. Pilot studies in the field have demonstrated that saliva from wild boar and wild ungulates can be collected by non-invasive sampling, and a PCR test has been optimised for detection of FMDV RNA on ropes or swabs collected from pens where infected pigs were present. There is a need to move to a pilot study in an country with FMD endemic in domestic population and where frequent wildlife exposure is anticipated and where conventional sampling of both domestic and wildlife could be used in a pilot study to demonstrate if FMDV circulation or its absence could be proven with use of non—invasive sampling. Desirable outcomes include guidance on optimised management of the application and collection of the baits/swabs in the field, and optimised level of pooling of samples for efficient use of lab capacity.

Pillar 3: To Promote the global strategy of progressive control of FMD

Theme 4: Methodologies for rapid evaluation of vaccine stability.

Intended application: To develop or utilise methodologies which can evaluate proportion of intact capsid in a vaccine , for use by vaccine producers or vaccine users as part of monitoring the impact of cold-chain storage upon vaccine integrity and likely potency.

Context: There is a high need for simple and standardized methods for evaluating if sufficient intact capsid is present in a vaccine to elicit protection, and other purposes. A previous call concerned development of ELISA and qPCR methods. The intention in the current call is to speed the application of such methods into QA procedures by vaccine producers and vaccine users. The desired outcome is data that indicates the relationship between vaccine capsid content and performance of vaccines, to assist the interpretation of results from vaccines after storage. Proposals that include a private partner (e.g. vaccine producer) are encouraged, as long as principal findings can be published to ensure the public need for peer-review of the methods is guaranteed.

Theme 5: Optimising the use of bulk tank milk for FMD surveillance

Intended applications: To develop tools for the design and implementation of surveillance for FMD using testing of bulk tank milk (BTM) samples, and to demonstrate proof of concept in an endemic setting.

Context: Recent advances in molecular testing for FMDV in milk and in the use of penside tests to detect antigen have created an opportunity to use the sampling of pooled milk (e.g. from multiple herds) as an efficient way of carrying out ”mass surveillance” . There is potential for optimising design of such surveillance to achieve the screening of significant part of a national dairy production system for monitoring (and early detection) of FMDV, with relatively few samples. This call is for development of tools for optimising design of a milk sampling and testing system, and proof of concept in a country where FMD is sufficiently frequent in dairy herds. A generic tool, adaptable to other milk-borne infections, is encouraged, while proof of concept can be limited to FMDV. Studies under this call are encouraged to demonstrate how BTM surveillance could be implemented in both FMD-free and FMD-endemic countries, and a pilot study to demonstrate proof of concept in surveillance systems should be carried out in an endemic setting.

Theme 6: Testing of biosafe transport methods for transport of FMDV RNA to international reference centres

Intended applications: the transport of FMDV RNA from the field (endemic or affected countries) to a reference centre for confirmation of infection, that is simple and efficient to operate and preserves the necessary information value in the sample. The aim is further utilise the devices to develop biosafe transport, through application to the transport of samples from endemic countries in Africa, mid-east or Asia.

Context: a previous project has shown that lateral flow devices (LFDs) can be inactivated and the membranes or LFDs transported to reference centres at which FMDV can be confirmed and typed by a range of tests, including sequencing and recovery of FMDV from intact RNA.

There is a need to develop a repeatable, affordable protocol for the application of this method into practise in countries where air transport to reference centres is currently complicated. Proposals from consortia that include likely submitters, those willing to fund transport, and reference centres willing to test samples on a regular basis are encouraged, that may make a ““new model ”” for enabling resource poor countries to access advanced reference centres in a simple and sustainable system

Nature of the funded research

Examples of research funded by the EuFMD under the “Concept Notes”’ scheme between 2008 and 2013 are given at the end of this section, and include Reviews, epidemiological studies, development of diagnostic tests and biological materials needed in reference centres, developing methods for full-genome sequencing, proof of concept on use of smart phones in outbreak active surveillance operations, etc.
Awards have an individual maximum of 50,000 €.
Research to be completed within 6-18 months.

Criteria

1. Relevance to strategic objectives or specific components of the EuFMD Strategy;
2. Address generic problems identified as common to many member states veterinary services;
3. Likelihood of Tangible results or outputs;
4. Urgency of need for results/outputs and lack of alternative funding;
5. Synergy or complementarity with field based activities relating to FMD;
6. Value for money.

Applicants

Applications are welcome from any source and are not limited by geographical origin. Awards are normally made to not-for-profit research centres with a capacity for signing the contract, with principal investigators capable of delivering quality research, and for managing funds and reporting. For-profit bodies are welcome to apply as part of a consortium but normally the financial award can be made only to a non-profit organisations. Interested parties can discuss ideas prior to proposal with the Secretariat or Members of the Standing Technical Committee. The applicant should declare this contact with the STC on the form. **The application form is given in Annex 2** and online.

Review Process

Applications will be assessed in two stages, first by external referees (Referee Panel) then by the Standing Technical Committee (acting as the Grant Review Board), a multidisciplinary panel of experts who are familiar with the priorities and scope of the fund and the context of the institutions which are expected to utilise the knowledge, tools and outputs.

Two-Tiered Peer Review Process

1st Review by Referee Panel

- TWO external referees are chosen for their expertise in specific research areas; at least one of these is from the EuFMD Special Committee on Research but not an applicant in the current call
- Initial review of scientific merit and research ethics
- Rate and give comments on each grant application

2nd Review by Grant Review Board

- Assess quality of Referee Panel's comments
- Final review of scientific merit and research ethics
- Evaluate relevance to scope of fund and thematic priorities, applicability to local context, applicant's track record, administering institution's research capability, "value for money" of proposals
- Make recommendations on funding to the Executive Committee

Assessment Criteria

These are provided in **Annex 1** and **online**.

Composition of the Referee Panel

The Referee Panel includes the 15 members of the Special Committee for Research and Programme Development (SCRPD) of the EuFMD, plus 3 experts from the FAO FMD Reference Centres in Europe. The Referees for each proposal will be selected by the Chair of the STC, or in the case of a conflict of interest, his/her Deputy. One referee must always be from the SCRPD but according to need, the Chairperson may also invite an external referee to undertake the review if the expertise is not present within the SCRPD.
Reviewers should complete a conflict of interest statement before review.

Composition of the Grant Review Board

The GRB is composed of the Members of the STC plus the Secretary, EuFMD Commission. DG-SANTE have the right to be represented in the GRB. Representatives of the GRB should complete a conflict of interest statement

before review, and if doubt exists, not take part in the review of the applications in which a conflict of interest may exist. The Chairperson should ensure that a minimum of there are at least three persons for any decisions, co-opting a member of the Executive Committee if this is required.
Minutes of these meetings will be reported to the EuFMD Executive Committee.

Award of Grants and dispersion of funds

The EuFMD Secretariat will provide the Executive Committee with the recommendations for funding; decisions will be normally taken by the Executive or the Chairperson of the Executive together with the EC at the regular Executive Committee Sessions at six monthly intervals. In case of urgency, decisions will be taken by the Chairman and the representative of the EC as soon as the Review Board have made their recommendations.
Funding will be dispersed by the EuFMD through Letters of Agreement (LoA) which are contracts between the FAO of the UN and not-for-profit institutions. In exceptional circumstances, the funds may also be dispersed through direct implementation mechanisms by the Secretariat where LoAs cannot be used. The application form should provide most of the details needed to enable the LoA to be finalised quickly after decision is taken, and initial funding dispersed. Limited changes to the proposal may be agreed when the LoA is negotiated and any major changes would require a review by the Chairman of the STC.
The Reporting schedule will be set at the time of the LoAs being agreed and normally the contractees must provide reports that co-incide with the timing of the 6 monthly STC meetings and provide an oral report to the biennial Open Session of the Standing Technical Committee (Next Session: October 2014 in Croatia)

Table 1: Titles of Research Studies funded by the EuFMD, 2008-16

1. Development of full genome sequencing methods and tools for application to FMD tracing in outbreak situations (Contractor: Pirbright);
2. 1st Global Review of research on FMD (Awarded to GFRA, Contractor OVI);
3. Comparative performance of NSP tests for use in regions affected by SAT viruses (Contractor OVI);
4. Production of antisera for vaccine matching against SAT viruses (Contractor BVI, Botswana);
5. Production of antisera for studies on type A FMDV from African and elsewhere(Contractor : Lelystad);
6. FMD epidemiology in wild boar populations in endemic areas of Anatolia, Turkey (Contractor FAO/SAP Institute Turkey);
7. Methods for real-time tracking wildboar dispersion in Europe (direct management with Bulgaria);
8. FMD serology using commercial kits for use in wild boar –parameters for negative populations (AFFSA);
9. Development of methods for non-invasive sampling of wildlife for FMD (direct management with Bulgaria);
10. Application of vaccine effectiveness study methods to assess type Asia-1 and type A vaccine effectiveness in Turkey (Pirbright);
11. Contract to develop an “FMD surveillance design and analysis model “ (FMDSurv software using multiple data sources to calculate confidence in FMD freedom) (AUSVet);
12. Application of smart-phone applications for real-time data collection in FMD outbreak investigation and local risk factor determination (Royal Vet College, London);
13. Improving molecular diagnostic tests for use with African FMDV; validation of PCR-serotyping of African FMDV serotypes and methods of transporting RNA/cDNA samples cheaply (DTU, Denmark and Pirbright).
14. Use of lateral flow device for safe and low cost shipment of FMDV suspected samples (ANSES, FMDVINACT)
15. Modelling of FMD-control strategies, including vaccination - adaptation of a model for use in various countries (FLI)
16. In vitro and in vivo experiments (domestic pigs) to optimise and validate a non-invasive sampling method of wild boar using maize baits (maize cobs with six swabs incorporated in each) and pSWABs (FLI)
17. Improving quality assurance along the FMD vaccine production and supply chain (TPI/CVI)
18. Realising the potential of simple isothermal molecular tools for field diagnosis of Foot-and-Mouth Disease (TPI)
19. Prototype Model for the Rapid Assessment of FMD Impacts (RVC)
20. 2nd Global Review of research on FMD (Awarded to GFRA, Contractor TPI);

Annex 1

EuFMD-FAR proposals: Assessment Criteria

Referee's Assessment

TWO External reviewers are invited to review each application, and to both objective and specific in their critical appraisal of each grant application, and to focus on the scientific merit and significance.

Scientific merit

- Originality;
- Relevance to the fund and thematic priorities;
- Significance of the research questions;
- Quality of scientific approach;
- Credibility of design and methods;
- Applicability of the outputs.

Research ethics/animal welfare

- Are there any ethical/animal welfare concerns?
- Are measures in place to address these?

Grant Review Board

After review by the Referee Panel, each proposal will be discussed further, bearing in mind the track record of the principal applicant, the research capacity of the administering institution and the value for money of the proposal. Funding recommendations will be finalised in the Grant Review Board meeting. Summary statements containing questions, comments and/or recommendations will be forwarded to the applicant.

Scientific merit (see above)
Research ethics (see above) plus

Relevance to the scope of funding

- Is the topic within the scope of the fund and the thematic priorities?

Track records of the applicants

1. What is the likelihood that the proposed study can be accomplished by the investigators given their documented experience and expertise? Track record includes the applicant's compliance with the terms and conditions of previous awards and records of research output.

Research capacity of the administering institution

- Research capacity refers to the ability of the administering institution to provide an environment conducive to productive research, in terms of

~ physical space;
~ facilities and equipment;
~ qualified research staff;
~ qualified support/administrative staff.

The emphasis placed on each aspect varies between applications, depending on their relative strengths.

Rating a Grant Application

A score ranging from **4** (Recommended for support / High) to **1** (Not worthy of support / Low) will be assigned by the referees to indicate the scientific merit under each heading in the Referee's Assessment Form. The overall rating for each application will be discussed and finalised in the Grant Review Board meeting. The overall rating is defined as follows:

4 - Recommended for support	Nil or very minor issues to address only
3 - Recommended for support subject to clarifications/ amendments	Minor revision and clarification required for a successful delivery
2 - Not recommended for support at present	Major revision required for significant improvement
1 - Not worthy of support	Minimal impact on research / flaw in methodology/ incomplete application/ out of scope of the fund

Annex 2

Application for Funding from EuFMD-FAR

PART A: TECHNICAL and PART B: ADMINSTRATIVE

PART A: TECHNICAL

1. TITLE OF THE STUDY (AND ACRONYM, IF LONG!):

2. Applicant Name and institution : …….

   Provide also e-mail and phone contact details

   Lead Investigator (if different)

   Is this application made on behalf of several parties (collaborators whose inputs will be vital to success)? If YES, give details

   a. *Add*

   b. *Add #2 etc.*

3. Has this proposal been discussed with members of the EuFMD Standing Technical Committee or Secretariat before application?
   YES/NO. If yes, indicate who and in what time period. Prior discussion can often be helpful to applications, but for transparency the extent of involvement of STC in steering proposals should be known by the Review Board.

4. Short description of the background to application
   Indicate how the problem area or research topic was identified - e.g. from a Session of the Research Group, following a country project or meeting, from own research findings etc

5. Key policy or technical issues addressed

6. Relation to the EuFMD Strategic Objectives 2013-17:

   The 3 Objectives are found in the Guidance Document, and online at the EuFMD site (40th General Session pages). Explain how the research will contribute to Strategic Objectives 1, 2 or 3; and indicating what types of institution or stakeholder will be the direct beneficiaries (immediate users) of the findings or outputs.
   Indicate if there is a specific link to a work component of the EuFMD/EC Action [one or more of the 13 Components; note it is NOT essential but if strongly linked has a possibility of funding under the budget for those components]

7. Technical Background

Up to 500 words plus references to indicate why the study approach was been selected, and any relevant references to methods that are essential to success of the approach but not yet widely accepted or applied.

8. Definition of Outputs

6.1 Simple and short definition of what the Service Provider will do:
Conduct a field based study, in vivo experiment, review, etc…

6.2 Simple and short definition of what the provider will PRODUCE: (Outputs)
These will be used by FAO to verify progress, for payment purposes, as for example a narrative report is used to justify interim payments.
e.g

- *Provide an interim report on project activities upon completion of the animal experiment.*
- *A final report detailing the activities conducted under the collaboration, which will be presented to the EuFMD standing technical committee and may be published on the EuFMD website.*

9. Description of study plan, activities and/or services to be provided by the applicant(s)

The detail to be provided must be sufficient to allow

- *assessment of the appropriateness of the method used,*
- *the data that will be generated for analysis;*
- *the efficiency of the design and use of inputs.*

10. Workplan and Timeframe (Duration)

The timing of major activities and milestones must be given, either in relation to the date of signature of the agreement/first payment, or in relation to monthly calendar if the study is affected by season, for example.

Proposed Date of final report:

(Note: not to exceed March 2015)

Milestone	***Details (example)***	***Due date***
1.	*Animal experiment and Interm report*	*+ 6 weeks after 1st payment*
2.	*Data analysis and final reporting*	*+10 weeks*

11. Inputs required to implement the project

Inputs to be provided free of charge by Recipient Organization

Indicate what is provided as part of the capacity of the applicants, and what additional support will be used for. Example: The Service Provider will make available a scientific team and FAO will make a contribution towards the overall cost of staff resources. Remaining time is provided free of charge by the Service Provider, during the overall timeframe of the LoA.

Inputs to be provided in kind by EuFMD or FAO

List of Inputs

Indicate if EuFMD or FAO are expected to provide any inputs, for example from the field components of the EuFMD work programme or other projects or activities.

Indicate if the application is dependent on decisions by any other agency (co-funding or affecting the progress) Added value: indicate if/how the application will add value to ongoing FMD activities/research of the applicant or partner.

Timing of Inputs

The usual schedule of payments for LoAs is an initial payment, an interim payment (upon an interim report) and a final payment after completion. The initial payment is usually not more than 30% of total. Indicate if there are specific need for a different schedule of payments, for example the majority of costs are up front for animal experiments, etc.

12. Budget (a detailed description of costs as estimated by Service Provider can be given in an Annex)

As far as possible, use a summary table with budget lines that your institution is prepared to report on later (in the Final Financial Report), and a separate table indicate how these were calculated.

Example of a summary

Budget lines	***Quantity***	***Amount, Euro***
Research and laboratory staff costs (1508 hours)	*See Annex II for further details*	*4177.7829*
Consumables and direct experiment costs (30 days)		*12467.422*
Overhead Expenses		*12703.306*
Total		***29348.51***

13. Bottlenecks/risks :

Indicate any assumptions that must hold if the activity is to reach expected output.
Indicate risks that could have a significant impact upon progress (and which might justify later requests for extension or change in plan, for example).

14. Further information on the matter

Copies of research cited that is vital to the understanding or evaluation of the proposal can assist.

PART B: ADMINSTRATIVE

Curriculum vitae of the lead applicant and any significant research partners should be provided.
Details on the Entity /Institution that is proving the administrative capacity may assist if the entity has no track record with FAO of LoAs or is non-Governmental.

1. Details on the applicant(s). The applicant is normally expected to be the contact point and provide the Reports.

2. Details on the Entity that will sign any financial agreement

3. Name and title of the person who will sign a financial agreement (the Signatory for a LoA with FAO)
    a. If Letters of Agreement (Standard Contract) with FAO are not feasible then suggested route for payment of the inputs required to undertake the activity:

4. Version Number: (the applicants Version number –useful in case changes are made)

5. **Date of this Submission:**