

Annual Work programme 2014: EU Reference Laboratory for Classical Swine Fever

I. Contractual duties

The contractual duties of the EURL are specified in Council Directive 2001/89/EC (OJ L 316 of 1.12.2001). On this basis the work programme has been set up.

II. Objectives for the period 1st of January 2014 to 31st of December 2014

Activities:	Description:	Objectives:	Expected Outputs:
<p>Activity 1: Production and supply of reference material</p>	<p>a. Storage and supply of cell cultures for use in diagnosis;</p> <p>b. Maintenance and enlargement of a classical swine fever (CSF) virus collection; propagation of CSF virus strains;</p> <p>c. Updating and maintenance of a World Wide Web database for CSF virus collection (including genome sequence data);</p> <p>d. Updating and maintenance of a World Wide Web database for CSF reference sera and tissue samples;</p> <p>e. Production, storage and supply of standardised sera and other reference reagents to the national reference laboratories upon request for standardisation of tests and reagents that are employed in the Member States, e.g. -reference material (sera, monoclonal antibodies, viruses, clinical specimens, cell cultures); -serum panels for validation of ELISA -serum panels for validation of PCR tests; -highly virulent CSFV for direct use in (vaccination) challenge experiments; -providing photographs or slideshows of CSFV infected pigs.</p>	<p>Support of National Reference Laboratories (NRLs) with reference materials and available data for these materials in order to coordinate and harmonise applied laboratory methods in diagnosis of Classical Swine Fever.</p>	<ul style="list-style-type: none"> • 1-10 new virus stocks collected from possible future CSF outbreaks • Collecting data of 1-10 new CSF viruses and include information (e.g. sequence data) in EURL CSF virus database • 16 new reference sera from pigs experimentally infected with 4 different CSF virus isolates at EURL facilities • 64 new reference tissue samples from pigs experimentally infected with 4 different CSF virus isolates at the EURL facilities • Collecting data of 16 new sera and 64 new tissue samples and include data in EURL CSF sera and tissue database • 30-40 supplies of reference reagents to NRLs and third countries upon request

Activities:	Description:	Objectives:	Expected Outputs:
<p>Activity 2: Inter-laboratory comparison test (ILCT)</p>	<p>Organising comparative tests of diagnostic procedures at Community level: <u>ILCT 2013:</u> Evaluation of results ILCT 2013; Follow-up of non-conformities ILCT 2013; Communicating results of ILCT 2013 to participating laboratories and EU Commission (DG SANCO) by presenting the data in the frame of the Workshop of Classical Swine Fever Reference Laboratories in 2014. <u>ILCT 2014:</u> Set up of CSF ILCT panel 2014 in cooperation with and according to the advice of the scientific advisory board; Production of reference material for the ILCT panel 2014; Validation and evaluation of CSF ILCT panel 2014; Notification of participating laboratories, packaging and shipment of CSF ILCT panel 2014;</p>	<p>Performance control of NRLs in diagnostic testing of CSF (European Union laboratories and third countries). Harmonisation of methods applied in different laboratories.</p>	<p>Follow up of the previous ring trial (2013) and organization of current ring trial (2014). (each containing about 20-24 samples that can be tested in 8 different diagnostic tests)</p> <ul style="list-style-type: none"> • 28 panels (to EU NRLs) and about 10 panels to other laboratories (EU candidate and pre-accession countries, associated countries as well as strategically important countries)

Activities:	Description:	Objectives:	Expected Outputs:
<p>Activity 3: Characterization of virus isolates</p>	<p>Characterization of CSF virus isolates by the most up-to-date methods available</p> <ol style="list-style-type: none"> a) Diagnostic laboratory testing of sample material for confirmation, exclusion or differential diagnosis; b) Animal experiments for studying virulence and pathogenesis of recent CSF virus isolates; c) Sequence analysis of recent CSF virus isolates from primary outbreaks of CSF in the EU and Third Countries (upon request) and evaluation of data from Member States on molecular epidemiology of CSF; d) Publication, provision and transfer of new methods to NRLs; e) Sequencing of complete CSFV genomes in order to fill in gaps of knowledge; f) Optimization of CSF virus sequence analysis in case of outbreaks (e.g. comparison of phylogenetic analyses based on different regions of the genome/ complete genome 	<p>Facilitating the understanding of epizootiology of Classical swine fever.</p> <p>Improving methods applied in CSFV virus phylogeny.</p>	<ul style="list-style-type: none"> • Performance of 1-2 animal experiments with CSFV at the EURLs facilities. • Characterization of 1-10 new viruses collected from possible future CSF outbreaks in the EU and Third Countries (depending on outbreak situation). • Further increase the number of NRLs which perform complete E2 gene sequence analysis.

Activities:	Description:	Objectives:	Expected Outputs:
<p>Activity 4: Gathering of information and expertise</p>	<p>a) Keeping abreast of new developments regarding CSF surveillance, epizootiology and CSF prevention throughout the world;</p> <p>b) Maintaining and extending networking activities with laboratory experts on CSF diagnosis and scientists working in the field of CSF virus;</p> <p>c) Retaining expertise on the virus causing CSF and other relevant viruses (e.g. ruminant pestiviruses and African Swine Fever Virus) to enable rapid differential diagnosis;</p> <p>d) Keeping abreast of developments regarding preparation and use of products of veterinary immunology applied in order to control and eradicate CSF.</p> <p>e) Collecting and collating data and information on the methods of diagnosis and the results of tests carried out;</p> <ul style="list-style-type: none"> • Collection of the country report data on CSF diagnostic activities for the year 2013 via a web based template; • Collection of the country report data on the CSF situation in wild boar for the year 2013 via a web based template and in parallel generation of the wild boar report 2013 directly through the “CSF in wild boar” surveillance database; • Editing of data and reporting to NRLs and EC; 	<p>Having qualified staff available for emergency situations occurring within the EU with relevant completed training in order to assist during outbreaks/ crisis situations.</p> <p>Assistance of the Commission, EFSA, ECDC and EMA in case of specific requests.</p> <p>Contribution to risk assessment and reviews of manuals or codes.</p>	<ul style="list-style-type: none"> • 3-6 times participation in relevant congresses and meetings • Collection of 2013 CSF country report and CSF Wild Boar report data and provision of the edited data to NRLs and DG Sanco • On-going reciprocal exchange of information with competent laboratories within the EU and third countries

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<p>Activity 5: “CSF in wild boar” surveillance database</p>	<p>Maintenance of CSF in wild boar surveillance database (subcontracting with Friedrich-Loeffler-Institute, Wusterhausen, Germany)</p> <p>a) Telephone and e-mail assistance through a support employee;</p> <p>b) Technical maintenance of the CSF in wild boar surveillance database;</p> <p>c) Support of Serbia, Romania and Croatia through individually customized training sessions and workshops in each country.</p>	<p>Risk assessment: Gathering and processing of data for improving the information available on CSF in Wild Boar situation in the EU and neighbouring countries.</p>	<ul style="list-style-type: none"> • Maintaining CSF in wild boar surveillance database • Individually customized training sessions and workshops (3x) held in countries interested in joining the database
<p>Activity 6: Provision of individual training in laboratory diagnosis at the EURL</p>	<p>Provision of individual trainings in laboratory diagnosis for CSF, if re-training of experts is needed or new techniques are to be established in an NRL (budget for training activities was calculated for three visitors for a time period of two weeks each). The training offer may include, upon request of the European Commission or TAIEX, the training of experts from non-EU countries as well.</p>	<p>Increasing the number of trained personnel available for emergency situations occurring within the Community. Improving the performance level of NRLs (e.g. follow-up of poor ILCT results) in diagnostic testing of CSF. Harmonisation of methods applied in different laboratories. Help with establishing new diagnostic techniques in NRLs for improvement of diagnostic standard.</p>	<ul style="list-style-type: none"> • Training of 3 visitors for a time period of 2 weeks each

Activities:	Description:	Objectives:	Expected Outputs:
<p>Activity 7: Organization of a joint Workshop on diagnosis and control on CSF and ASF for the respective NRLs (in cooperation with DG Sanco and the EURL for ASF)</p>	<p>a) Preparation of programme for CSF part of the joint Workshop and working documents; b) Scientific contribution: presentation of ILCT results, EURL activities and research activities; c) Collection and editing of material for a report on the Workshop; d) Preparation of the Workshop report e) Making presentations available for download on the website of the EURL in a restricted area.</p>	<p>Training of experts in laboratory diagnosis with a view to the harmonization of diagnostic techniques throughout the Union. Exchange of information on current CSF situation in Member States and in neighbouring countries of the EU, presentation of news in research topics, laboratory techniques and epidemiology of CSF.</p>	<ul style="list-style-type: none"> • Participation of representatives from 28 EU NRLs and of selected representatives from strategically important non EU laboratories in the 2014 Workshop • Harmonization of diagnostic testing and exchange of experience in CSF diagnostics
<p>Activity 8: Missions and permanent training of staff</p>	<p>a) Permanent training of staff to keep abreast of new developments, including the attendance of international meetings and conferences; b) Provision of trained personnel for missions on demand of DG SANCO; c) Provision of trained personnel for missions to National Swine Fever Laboratories/ Member States asking for assistance;</p>	<p>Maintaining the capability of providing trained personnel for emergency situations occurring within the Community.</p>	<ul style="list-style-type: none"> • 0-2 visits to NRLs for training sessions (depending on CSF situation in the EU and on performance of NRLs in ILCT testing) • One meeting at the premises of the EURL for training purposes of EURL staff • Participation in international meetings and conferences , attending of seminars on virology

Activities:	Description:	Objectives:	Expected Outputs:
<p>Activity 9: Projects and activities related to improved CSF virus diagnosis and control</p>	<p>a) Identification and characterization of new pestiviruses in order to improve differentiation between porcine and ruminant pestiviruses; b) Preparation and publication of articles and reports associated with above work, attendance of international meetings and conferences.</p>	<p>Performing research activities and whenever possible coordinate research activities directed towards an improved control of CSF.</p>	<ul style="list-style-type: none"> • Mutual exchange of information with competent laboratories /authorities in the EU and in third countries • Contribution to scientific conferences, e.g. presentations of research results (speaker, posters) • Publications in peer-reviewed journals

It is understood that the above mentioned objectives are not exclusive to other work of more immediate priority which may arise during the given period.

Annex

Projects and related research activities funded by other sources

- ZIM project (Zentrales Innovationsprojekt Mittelstand) “Development of a novel classical swine fever specific diagnostic test for differentiation of vaccinated from infected animals“. Funded by the Bundesministerium für Wirtschaft und Technologie;
- Project “Mechanisms and biological significance of genetic variability of RNA viruses“ (BE 2333/2-2) funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Council);
- Project „Identification and characterization of novel viruses originating from farm animals“. Part of the activities of the DZIF (“Deutsches Zentrum für Infektionsforschung“). Funded by the Bundesministerium für Bildung und Forschung.
- Member of the *Flaviviridae* Study group of the International Committee on Taxonomy of Viruses, ICTV (Prof. Paul Becher);
- Participation in international research projects and networks, e.g. European Research Group (former “EPIZONE”);