**Work Plan 2014 for the European Union Reference Laboratory**

**for Foot-and-Mouth Disease**

**(for the period 1st January -31st December 2014)**

**Activity 1.**

**Description:** The laboratory shall perform experiments and European Pharmacopeia potency tests on vaccine antigens held in the European Union FMD vaccine bank. The specific strains of vaccines to be selected will be those that are held as vaccine antigens within the European Union Vaccine bank in consultation with the Commission.

**Objective:** To update the collection of antisera against a FMDV or FMD vaccine as needed for the FMD proficiency test schemes, reference sera, the vaccine matching tests and other diagnosis tests; and to evaluate the protection efficiency from a vaccine antigen within the European Union Vaccine bank for the updated virus which poses potential threat to European Member States and countries. Updates regarding the performance of FMD vaccines against contemporary field strains (and an early warning regarding vaccine failure) will be obtained at the OIE/FAO Reference Laboratory Network meeting (mission).

**Expected outputs:** One or two antisera and/or potency tests for prioirity strains will be produced and undertaken during 2014.

**Activity 2.**

**Description:** Preparation and distribution of virological and serological samples for the annual inter-laboratory proficiency test (PT) of National Reference Laboratories (NRLs) of EU Member States. Data generated will be collated and information on the performance of methods of diagnosis at each EU NRL will be analysed. These data will be distributed to the participating NRLs and to the Commission. Where required, short term missions by EURL FMD staff will be undertaken to provide specific training and expertise to rectify the poor performance of assays used by NRLs in EU Member States.

**Objective:** To promote harmonisation of diagnosis and ensure proficiency and external quality assurance of testing within the Community and to transmit of the results to the Commission, the Member States, and National Laboratories;

**Expected outputs:** The proficiency test (PTS) 2014 consisting of 4 panels and containing infectious or non-infectious (serology) materials will be organised during 2014. All NRLs from EU Member States are expected to participate in this exercise. Where appropriate, corrective action will be implemented to improve the performance of participating NRLs in EU Member States.

**Activity 3**

**Description:** The laboratory shall organize an annual meeting where representatives of the EU NRLs will receive the information on the annual proficiency test (PT) and recent developments in foot-and-mouth disease epidemiology (regionally and globally), a review of diagnostic techniques and the progress of coordination when this is necessary. A member of the EURL for FMD will participate in an EuFMD meeting to discuss the global distribution of FMD, gain

updates regarding vaccine protection against circulating field strains of FMD, and review changes to epidemiological patterns that could threaten European Member States. Important findings from this mission will be summarized at the annual meeting, or disseminated more rapidly to the NRLs (via email if urgent).

**Objective:** To distribute the information on the methods of diagnosis and differential diagnosis used in EU NRLs and the updated status of global FMD situation to the Commission and the Member States.

**Expected outputs:** The annual NRL meeting 2013 will be held during February/March 2014, All NRLs will be invited and nominated representatives will be expected to attend the annual workshop.

**Activity 4.**

**Description:** Maintenance of the EURL(CRL) FMD web-site and development of software for assisting the management of the annual proficiency test.

**Objective:** To share information between the EURL and EU NRLs; and to efficiently manage the annual proficiency test schemes by accurately decoding and analysing the results from labs participating in the study through using the software.

**Expected outputs:** the EURL(CRL) FMD web-site is in active through the year and the software for the PTS will be close to trial stage.

**Activity 5.**

**Description:** The laboratory shall make and implement the necessary arrangements for the training on laboratory diagnosis techniques.

**Objective:** To assist the updating and improving the diagnosis techniques from National/Central Laboratories by providing the training of the experts from the laboratories and promote the harmonization and standardization of FMD diagnostic techniques cross the Member States.

**Expected outputs:** A two-week training course on FMD virological and serological diagnostic techniques will be organised during May 2014 by the EURL FMD at The Pirbright Institute.

**Activity 6.**

**Description:** Receiving field virological and serological samples from EU Member States and countries geographically or closely linked to the European Union in terms of trade in animals of susceptible species or products derived from such animals; performing primary or confirmatory diagnostic testing and full antigenic and genomic characterisation of the virus from the samples received. Communicating the results of such investigations without delay to the Commission, the Member State, and the National Reference Laboratory concerned. Provision of advice on the selection of the vaccines should this is requested from EC or national authorities from European Member States and countries.

**Objective:** To fulfill the function of EURL FMD by testing and characterizing the samples submitted from the Member States and communicating the results to the Commission, the Member State, and the National Laboratory concerned; monitoring the disease situation globally and regionally to estimate and where possible predict the risk evolving from emerging virus strains and particular epidemiological situations. A member of the EURL FMD team will participate in the SEACFMD in order to maintain current knowledge about the circulation and epidemiology of FMD strains in endemic regions of Asia that pose a risk to EU Member States.

**Expected outputs:** Samples receiving from the Member States will be tested and characterized as the priority and the results will be provided to the EC and member states without delay.

**Activity 7.**

**Description:** Building up and maintaining an up-to-date collection of vesicular virus strains and specific antisera. Storing and supplying National/Central Laboratories with reagents and materials for use in diagnosis of foot-and-mouth disease such as virus and/or inactivated antigens, standardised sera, cell lines and other reference reagents. Carrying out research studies where necessary internally and/or in collaboration with National Laboratories

**Objective:** To support the functions of National/Central Laboratories of each Member State; to develop improved methods of disease control to provide the updated and optimal methods for the diagnosis of foot-and-mouth disease in livestock, and differential diagnosis of other vesicular viral diseases, where necessary.

**Expected outputs:** The FMD diagnosis reagents and kits described as the above will be supplied under the request from the Member States. Diagnostic kits for FMDV antigen and/or antibody detection will be validated during 2014.

European Union Reference laboratory for FMD

13th August 2013