

**WORKPLAN FOR THE COMMUNITY REFERENCE LABORATORY FOR BLUE TONGUE FOR THE PERIOD JANUARY 1<sup>st</sup> - 31<sup>st</sup> DECEMBER 2012**

<b>1. LEGAL FUNCTIONS AND DUTIES</b>	
i)	<b>Receive, examine and report on samples submitted by EU Member States and countries surrounding the EU.</b>
i)	<p>Examine diagnostic samples by one or more of: BT virus antibody and antigen detection ELISA, SNT, VNT, PCR, real-time PCR and virus isolation from:</p> <ul style="list-style-type: none"> <li>- Member States of the EU</li> <li>- Other European countries, particularly those adjoining Member States</li> <li>- Other countries where a BT outbreak could impact on Member States of the EU</li> <li>- Trading Partners, i.e. any country from which the EU imports sheep, cattle and other ruminants.</li> </ul> <p>The service to Member States will comprise:</p> <ul style="list-style-type: none"> <li>- Primary diagnostic service for those Member States which do not have reliable diagnostic services of their own.</li> <li>- Rapid confirmatory service for those countries able to perform primary diagnosis themselves.</li> <li>- Advice on epidemiological relationships with known isolates and possible origins of incursions into the EU.</li> </ul>
ii)	Prepare financial and technical reports on the activities of the CRL for BT.
<b>2. OBJECTIVES FOR 2012</b>	
<b>Activity 1: Maintaining, characterising, and holding a BT virus collection by means of biological and biochemical characterisation of historical and recent isolates to enable a greater understanding of the epidemiology of BT.</b>	
i	Seek and receive virus isolates and related information from Member States and from any other country, as part of the diagnostic or confirmatory service of the CRL for BT.
ii	Grow and antigenically characterise isolates using serogroup specific polyclonal and monoclonal antisera, as required.
iii	Clone and sequence isolates to add to the IAH database for topo-typing virus isolates and determination of their phylogenetic and functional relationships, for the purposes of identifying the geographical and biological origins of BT virus isolates.
iv	Provide sequence data, phylogenetic relationships and information on origins of BT virus isolates, and viral relationships to the EC and National BT Reference Laboratories.
<b>Activity 2: Typing, storing and supplying strains of BT virus for serological tests and preparation of antisera. Storing and supplying cell cultures for use in diagnosis.</b>	
i	Examination of new isolates, field and vaccine derived, for significant differences to current reference strains, by serological, PCR and sequencing techniques.
ii	Characterise and define all serotypes
iii	Quality control of antisera.
iv	Supply reagents to Member States of the EU.
Vi	Introduce and maintain cell lines for BT virus isolation, maintenance of cell stocks and media for testing purposes.

**Activity 3: Standardisation of the tests and reagents employed in Member States by means of the organisation of comparative tests of diagnostic procedures at Community level**

- i Undertake a standardization or ring trial of BT PCR and ELISA testing with EU National BT Laboratories, States bordering the EU and, as appropriate, those countries trading with the EU and/or of epidemiological importance to the EU.
- ii Distribute material to be tested, together with standardised reagents and protocols, as required, by National Laboratories.
- iii Prepare programme and working documents for a joint AHS / BTV meeting to include a report on the 2012 ring-trail for National Reference Laboratories and invited scientists.
- iv Collecting and editing material for the report covering the Annual Meetings of the BT National Reference Laboratories in 2012 and the CRL Annual Report for the year 2011.
- v Collate and analyse results.
- vi Prepare and present the report on the standardization exercise.
- vii Organise the joint African Horse Sickness and Bluetongue annual meeting and workshop in London in 2012.
- viii Make recommendations to the Commission regarding the testing carried out in National Laboratories and requirements for standardisation.
- viii Infect sheep or other animals as necessary to obtain materials for distribution. Standardise and quantify control material to be distributed.

**Activity 4: Keeping abreast of developments in surveillance, epidemiology and prevention of BT throughout the world. Retaining and develop expertise on BT virus (and other arboviruses) which are pertinent to rapid differential diagnosis.**

- i Attend and participate in meetings, workshops and conferences in epidemiology, virology and entomology associated with BT. Peruse all relevant literature.
- ii Undertaken training, reading, research and participation in conferences and workshops in epidemiology, virology and entomology on BT, AHS, EHD and EEV.
- iii Develop further capacity and keep abreast with molecular testing e.g. real time PCR to improve capacity for rapid diagnosis and surveillance.

**Activity 5: To have trained personnel available for emergency situations, missions and inspections. To support, by means of information and technical advice, projects of epidemiological investigation on recent outbreaks of BT.**

- i Provide training in BT diagnosis in clinical assessment, serological and molecular testing techniques and vector surveillance to EU staff as required.
- ii Respond to requests from and proactively offer advice to the Commission.
- iii Organise training mission to Turkey (response to poor ring trial results in 2010 and 2011)
- iii On-going projects on several areas of BT research (funded by EU, DEFRA and BBSRC based at IAH and elsewhere) already benefit from CRL advice and information. These interactions will continue and be extended in 2012.
- iv Lead, participate in and support the EFSA BT Working Group, the EC CA project (MedReo Net), EPIZONE, EMIDA, Discontools and other such operations as required.

**Activity 6: Develop and maintain a CRL website and sequence database to be used for the sharing of information related to BTV in EC countries.**