



Overview of OFFLU Technical Activities

OFFLU Technical Activities are made up of leading experts from the OFFLU network who work together in small discussion groups to address relevant animal influenza related technical problems. The topics for the Technical Activities are identified by the experts at regular OFFLU technical meetings, and represent pressing issues.

These Technical Activities aim to provide concrete outputs including guidance and recommendations, better diagnostic tests, and outputs from data analyses. Whilst at the same time strengthening links between experts within the OFFLU network and with the public health sector.

Some of the groups are set up on a temporary basis until the issue is resolved and others function on an ongoing basis to provide consultancy advice to OFFLU; several include experts from the public health sector (WHO).

There are currently 8 Technical Activities, each of which is coordinated by a group leader:

- **Applied epidemiology group***

Leader – Cristobal Zepeda (Centers for Epidemiology and Animal Health, Fort Collins, USA)

The OFFLU applied epidemiology group functions on an ongoing basis to provide expert epidemiology advice on pertinent animal influenza topics.

In April 2009 the group was mobilised to provide advice on surveillance for pandemic H1N1 2009 virus at the human – animal interface. The outputs from these discussions were further refined to develop a surveillance strategy for pandemic H1N1 2009 in pigs and poultry.

The group is currently engaged in developing a broad OFFLU animal influenza surveillance strategy document (http://offlu.net/OFFLU%20Site/OFFLU%20surveillancepH1N1_180110.pdf) which will provide an overview of the objectives, approaches, and benefits to

conducting influenza surveillance in a range of systems across the animal kingdom. It is also undertaking an analysis to compare approaches to avian influenza surveillance in different regions.

- **Standard H5 antisera**

Leader – Ian Brown (Veterinary Laboratories Agency, UK)

The objective of this group is to establish, through a collaborative exercise, a global reference standard antiserum for H5 avian influenza viruses.

Through collaboration between several OFFLU laboratories the group is attempting to select an antiserum which has a high specificity to H5 influenza virus and is broadly cross reactive with a diverse panel of virus strains from all geographical regions. Once the most suitable antiserum has been selected the group will choose a Reference Laboratory to undertake supply and production. A further round of validation will then be conducted.

- **Biosafety***

Leader – Beverley Schmitt (National Veterinary Services Laboratories, Ames, USA)

The group provides biosafety guidance specific to handling influenza viruses in animal health laboratories. The guidance is balanced to provide a model that is fit for purpose in both well resourced and less well resourced laboratories.

So far the group has developed guidance on minimum biosafety requirements for handling highly pathogenic avian influenza viruses, and for handling pandemic H1N1 2009 viruses in veterinary laboratories.

<http://offlu.net/OFFLU%20Site/biosafety.pdf>

<http://offlu.net/OFFLU%20Site/OIEguidanceH1N1.pdf>

- **Vaccination**

Leader – David Swayne (South East Poultry Research Laboratory, Georgia, USA)

The vaccination Technical Activity provides advice to OIE, FAO, and WHO on matters relating to the design and assessment of avian influenza vaccines and their use in poultry.

On the basis of the scientific studies and discussions held around two OFFLU technical projects (Indonesia and Egypt) on vaccine efficacy, the group has developed guidance to address selection of vaccine seed strains to meet the demands of antigenic drift in the field.

http://offlu.net/OFFLU%20Site/OFFLU_vx_matching.pdf

<http://www.offlu.net/OFFLU%20Site/Projects/information%20OFFLU%20project5.pdf>

<http://www.offlu.net/OFFLU%20Site/Egypt%20Project.pdf>

- **Technical issues at the human animal interface***

Leaders – Ilaria Capua (IZSve, Padova, Italy) and Liz Mumford (WHO, Geneva)

This Technical Activity addresses issues at the OFFLU – public health interface, and functions on an ongoing basis to improve exchange of influenza related information such as virological and epidemiological information between the animal and public health sectors.

The group was particularly active during 2009 when there was a need to rapidly share information relating to the implications for animal and human health following the emergence of pandemic H1N1 2009 in humans.

The group is looking to formalise the mechanisms for data exchange between OFFLU and the public health sector.

- **Reference standards for PCR**

Leader – Timm Harder (Friedrich–Loeffler Institute, Germany)

To develop an RNA standard, initially for H5 avian influenza.

Quality–assured performance of influenza A virus–targeted PCR assays requires a control of all steps of these procedures:

- correct extraction of nucleic acids from clinical samples,
- efficient transcription of RNA,
- succesful amplification of cDNA.

This OFFLU technical activity seeks to generate a universally usable RNA standard which fulfils the above mentioned criteria. The approach is based on *armoured RNA*

- **Proficiency Testing***

Leader – Nichole Hines (National Veterinary Services Laboratories, Ames, USA)

This technical activity aims to provide guidance on harmonisation of approaches to proficiency testing for avian influenza diagnostics. A questionnaire was circulated to 14 OFFLU laboratories to establish how these laboratories were conducting proficiency tests and to collect their opinions on how approaches to proficiency testing could be standardised.

The responses to this questionnaire will be used to develop guidance material.

- **Diagnostic kits – information about commercially available kits**

Leader – Marek Slomka (Veterinary Laboratories Agency, UK)

The group aims to compile an inventory of commercially available kits and, where manufacturers provide consent, to list information about their performance and fitness for purpose.

* denotes technical activities that include public health (WHO) representation.