



20 October 2013

OFFLU Summary report of WHO VCM September 2013

Dear OFFLU Colleagues,

The VCM-Southern Hemisphere was held in Geneva last week and I truly wish to acknowledge OFFLU once again for having made my participation possible. I would also like to thank Filip Claes, who was with me in Geneva, Stephanie Sonnberg and Frank Wong. Together, we collected and analysed the data, as well as drafted and revised the OFFLU report for this meeting. I am also grateful to the OFFLU colleagues for providing the antigenic data on their respective H5N1 isolates, and to the colleagues of the several OFFLU laboratories who have contributed with genetic data. Richard Webby, Ruben Donis and their teams in the WHO CC in Memphis and Atlanta are also gratefully acknowledged for having prepared and shipped the standard reagents necessary for the antigenic tests.

The OFFLU contribution and the related presentation on zoonotic avian influenza data (H5, H7, H9) collected between February-September 2013 were well appreciated and received by all participants. I am herewith appending the final report of the VCM on the H5, H7 and H9 AI viruses, where all the data presented by the participants and the related discussions and recommendations have been summarized. The file has also been posted on the WHO website (http://www.who.int/influenza/vaccines/virus/201309_h5h7h9_vaccinevirusupdate.pdf). OFFLU has substantially contributed to the avian flu viruses genetic data presented at the meeting. AI genetic data were also presented by the CDC-USA, St Jude CRH-USA, Hong Kong University, and CNIC-China.

Notably, the unique contributions of OFFLU has made available the genetic data on the recent 2.3.2.1 H5N1 virus detection in DPRK and in the quarantined birds in Austria (Indonesia origin), as well as genetic and antigenic data concerning the very recent H7N7 HPAI in Italy.

Additionally, OFFLU genetic data on 46 H9N2 viruses from Africa, Europe and Asia were presented.

OFFLU contributed also with the antigenic data on H5N1 viruses, providing information on 11 isolates recently detected in the OFFLU laboratories. Provision of antigenic data is strictly

dependent on the availability of standard reagents (i.e. antigens and related homologous ferret sera) to perform the serological tests (HI). Standard reagents are produced by WHO Collaborating Centres and distributed to selected OFFLU laboratories.

Harmonization of testing procedures for the provision of the antigenic data has been recently established (see OFFLU reports prepared for the previous VCM – in 2012), thus enabling comparison of results between the WHO and the OFFLU laboratory networks, as well as among the OFFLU laboratories.

However, considering that the provision of the antigenic information is probably one of the most important issues for the WHO consultation (i.e., the selection of the most appropriate vaccine strain candidates), there are still some areas for improvement regarding the OFFLU contribution to this specific part.

Referring to a post-VCM report issued in September 2012, some key points were identified last year (in italics below) and partially solved to date.

1. *Agreement on the appropriate panel of the standard reagents to be distributed to all the OFFLU selected laboratories. It should be noted that reference antigens should be provided together with the homologous ferret serum for the correct interpretation of the antigenic results. This standard panel should match the basic, standard panel used in the various WHO laboratories.* This issue has been solved, and a general consensus on selected reference reagents has been achieved.
2. *Timely provision of the standard reagents. Reference antigens and ferret sera should be distributed well in advance to grant OFFLU laboratories enough time for testing, interpreting results and validating data before the VCM date.* This issue has been only partially solved. The major challenges consist in the production capacity of the distributing laboratories and consequent limited availability of the reagents. In the past year, some reference antigens were distributed as “live virus” to some OFFLU labs in order to allow for the “in-house” antigen production. This solved the problem only partially, as difficulties remain for producing ferret reference sera and – for some countries – complications may occur when importing genetically modified live virus strains.
3. *Generation of the HI data by the OFFLU labs in a timely manner and submission of the data to the OFFLU secretariat in the proper excel format. This would reduce the time for data analysis and will provide enough time for test replicas and confirmation, if necessary.*

This problem has come to light also in the preparation of the present VCM. The HI data of one OFFLU lab were generated only a few days before the deadline and some results needed to be repeated. Unfortunately, time was not enough and data could not be presented . This

problem might be a consequence of the limited availability of the reagents and restricted stockpile in the OFFLU labs, as described in point 2.

In an attempt to overcome these problems, a group represented by OFFLU and WHO CCs actively working on zoonotic influenza met in Geneva on the occasion of the VCM. Apart from supplying reference antigens (inactivated or live, depending on the import permits) and sera for the candidate vaccine strains, it was suggested that selected OFFLU labs could independently produce ferret sera for H5N1 selected (recent) field viruses collected through the OFFLU network. This would imply availability of adequate animal facility in the OFFLU laboratories, sharing of the selected field viruses within OFFLU, as well as distribution of the reference material among the OFFLU testing labs and, presumably, some WHO CCs.

The OFFLU representatives also noticed limited inputs of genetic and antigenic data for virus clades endemically circulating in some Asian countries. Sensitization and awareness of National authorities and local scientists on the importance and impact of the OFFLU contribution to the VCM is perhaps necessary and may represent an adequate and straightforward solution to increase the availability for the VCM to access the data existing at the animal health side.

Best regards

Giovanni Cattoli

IZSVe, Italy