



<p>Reported by: PD Dr. T.C. Harder O.I.E. and NRL AI, IVD, FLI D-17493 Greifswald-Insel Riems, Germany Tel: +49 38351 7152 timm.harder@fli.bund.de</p>	<p>WHO working group meeting on PCR protocols for the detection of influenza A viruses</p>	<p>10/06/2009 Page:1 / 3</p>
--	---	----------------------------------

Location and date

WHO headquarters, Geneva, Suisse; 30.04. – 01.05.2009

Workshop participants

WHO headquarters (GIP, GIS)

Dr. Sylvie Briand
Dr. Wenqing Zhang
Dr. Terry Besselaar
Dr. Magdi Saad (Moderator)

WHO Collaborating Centers (CC)

Dr. Ian Barr, VIDRL, Melbourne, Australia
Dr. Kai-Hui Wu, CDC, Atlanta, USA
Dr. Alexander Klimov, CDC, Atlanta, USA
Dr. Masato Tashiro, NIID, Tokyo, Japan
Dr. Stephen Lindstrom, CDC, Atlanta, USA (part time by telephone)

Other medical virology institutes

Dr. John Franks, St. Jude Hospital, Memphis, USA
Dr. Wilina Lim, Centre for Health Protection, Hongkong, PR China
Dr. Malik Peiris, Dept. of Microbiology, Hongkong University, Hongkong, China
Dr. Leo Poon, Dept. of Microbiology, Hongkong University, Hongkong, China
Dr. Sylvie van der Werf, Institut Pasteur, Paris, France
Dr. A. Mishra, National Institute of Virology, Pune, India
Dr. Carlos de Mattos, NAMRU3, Cairo, Egypt (excused)

OFFLU

Dr. Timm Harder, Friedrich–Loeffler Institute, Isle of Riems, Germany

Agenda

See attached pdf.

Official minutes and conclusions

See attached pdf.

Points of remark from an OFFLU (veterinary) perspective

Participants

Permanent members of this WHO working group which is comparable to a "Technical Group" within the OFFLU circle are the heads or high ranking scientists of institutes at the top level of research on human influenza virus which also set standards for influenza diagnosis. Despite the flaring–up of novel A/H1N1 epidemic only two members cancelled their (physical) participation.

Training

The training of staff from National Influenza Centers (NICs) is an important issue dealt with by this working group. Training capacities of the WHO CCs and of several other institutes are impressive. For example, the two Hongkong institutes (Centre for Health Protection and HK University/Microbiology) alone are able to accommodate each up to 15 trainees in parallel! Training laboratories and equipment separate from routine working laboratories and special staff for training purposes are provided. Same holds true for the CDCs.

Proficiency testing

Since 2006 bi–annual ring trials for molecular influenza diagnosis are organized and issued by the Hongkong Centre of Health Protection (Dr. Lim). These comprise 10 RNA samples derived from viruses of subtypes H5N1 (several clades), seasonal H1N1 and H3N2 as well as influenza B virus. The ring trials are sent out to up to 120 NICs. Officially, detection of influenza A/B virus is sufficient to pass the trial but subtyping is carried out by most NICs. Future ring trials will also include the novel A/H1N1 virus and, possibly, an influenza A virus which is “exotic“ to the medical world (e.g. H9N2) to mimic the situation of detection of an “untypable“ influenza virus.

Diagnostic manual

A detailed description of molecular methods for detection, subtyping and antiviral resistance testing is provided. Curation of this manual is one of the main tasks of this working group. *Ad hoc* work during the meeting included the production of a two page update on newest developments in the molecular diagnosis of the novel A/H1N1 viruses (to appear on the WHO website). The manual is publicly provided on the WHO website.

Centralized production and distribution of diagnostic tools

Some primer/probe combinations for WHO-recommended methods are bulk-produced and provided free of charge to NICs through CDC (e.g. rRT-PCR kit for A/H1N1 swl).

Areas of mutual interests/synergies between WHO/PCR working group and OFFLU

Problems of molecular influenza virus diagnosis are similar in the veterinary and the medical world:

- Constant updating and validation of methods,
- training of staff,
- assembly of proficiency testing panels,
- communication between group members.

WHO expressed strong interest in generalized diagnostic approaches such as multiplexed rRT-PCRs, pan-HA/NA RT-PCR methods and low density microarrays which have been developed for avian influenza viruses. Also, mutual exchange of virus strains for completion of, e.g., proficiency testing panels has been positively discussed. Participation of OIE/FAO AIV reference laboratories in WHO NIC ring trials has been envisaged.

Summarized impressions

The WHO influenza PCR working group seems to be well established and is carried by members of leading research and diagnostic institutes in the medical influenza virus field. WHO expresses an dedicated interest in the output and forthcoming of this group. This appears to be backed-up by a possible financial input from the WHO.

WHO has also declared its wish of a permanent linkage to veterinary diagnostic circles in the influenza virus field, i.e. OFFLU, via a membership of an OFFLU representative in the WHO working group.

It is my personal impression that OFFLU and its OIE/FAO reference laboratories could benefit in several aspects from such a linkage, e.g., by

- adopting/modifying standing organizational structures
- strengthening communication bonds to the medical influenza virus world
and by enabling the
- facilitated exchange of diagnostic tools.

Riems, 03.05.2009, Timm Harder