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Establishing OIE H5 Reference Standard Sera



Group membership



- AHVLA Weybridge
- AAHL Geelong
- FLI Reims
- USDA Ames
- Hokkaido University, Japan
- IZSV, Padova
- NCFAD, Winnipeg



Aim:

to establish through a collaborative exercise amongst OFFLU partners a global reference standard serum for H5 influenza A virus

Approach

- Statistical analyses of data to make a selection of the sera that best met the following criteria:
 - high specificity to H5 virus
 - producing broad cross reactivity with a diverse panel of virus strains
 - preferably representative of all geographical regions
- It was necessary to specify two reference standard sera with heterologous NA subtypes in order to accommodate the problem of cross interference from anti neuraminidase antibody
- Selection of a reference standard serum made by group and candidate laboratories identified to undertake supply and production
- OIE reference standard serum distributed to all OIE laboratories and standardisation data collected from each participant before it's available for general release

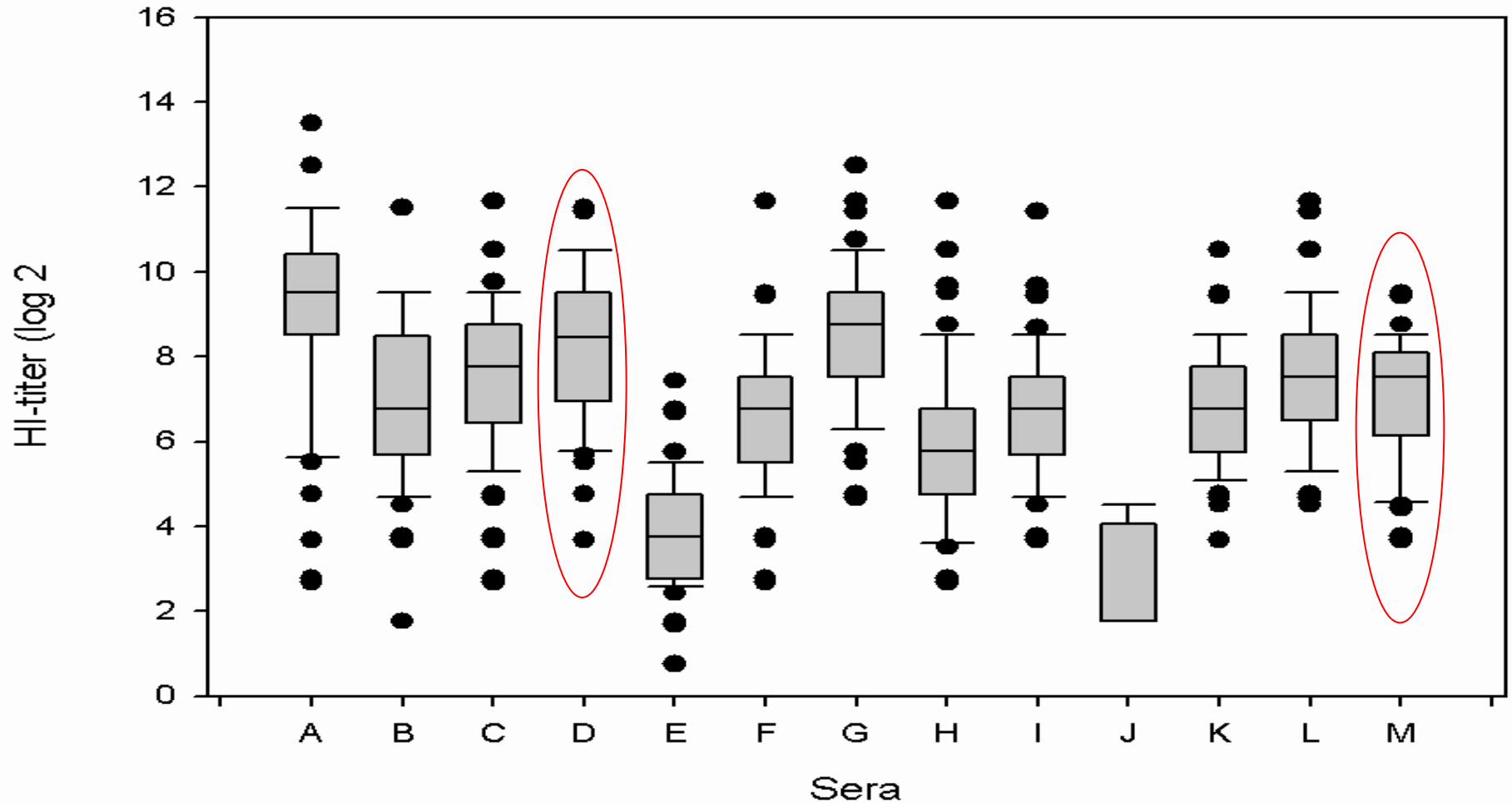


Fig. 1 Reactivity of a panel of reference sera for avian influenza H5 subtype.

12 AIV H5 reference sera and one negative control serum (J) was tested by 7 regional OIE-laboratories using a total of 77 AIV-H5 antigens, representing local and historical AIV-strains. Normalized HI-reactivity are depicted as box blots showing the median (bold line), the upper and lower hinge (25 % and 75 % respectively) and outliers (•).

Antigens selected for raising large batch of standard H5 serum



- Serum D: A/chicken/British Columbia/06 (H5N2)
- Serum M: A/turkey/Wisconsin/68 (H5N9)
- Reference antigens
 - A/teal/England/7894/06 (H5N3)
 - A/duck/New York/2670/09 (H5N2)

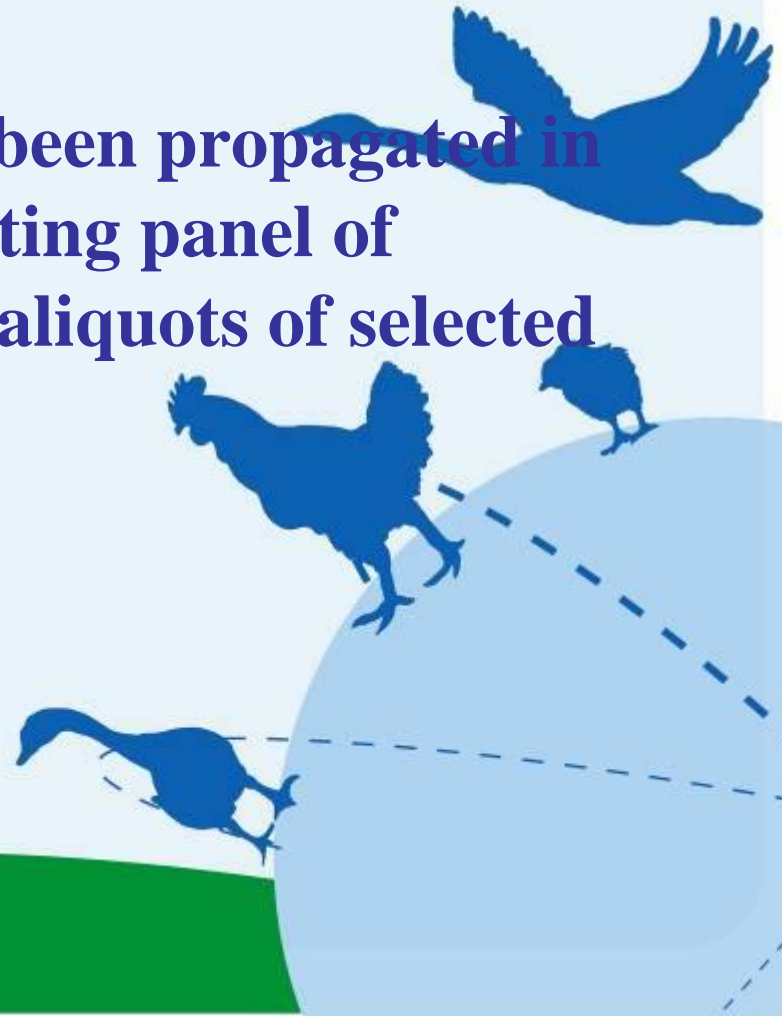
A small number of aliquots of the selected sera have been received by the originating laboratories along with the homologous viruses.

Selected reference viruses have been propagated in anticipation of sending a pre testing panel of reagents to partners along with aliquots of selected sera.

OFFLU secretariat

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To be done

Reference Antigens and proposed sera to be distributed to partners to test against panel of H5 antigens and sera held by partner laboratories, including new emerging clades of H5.

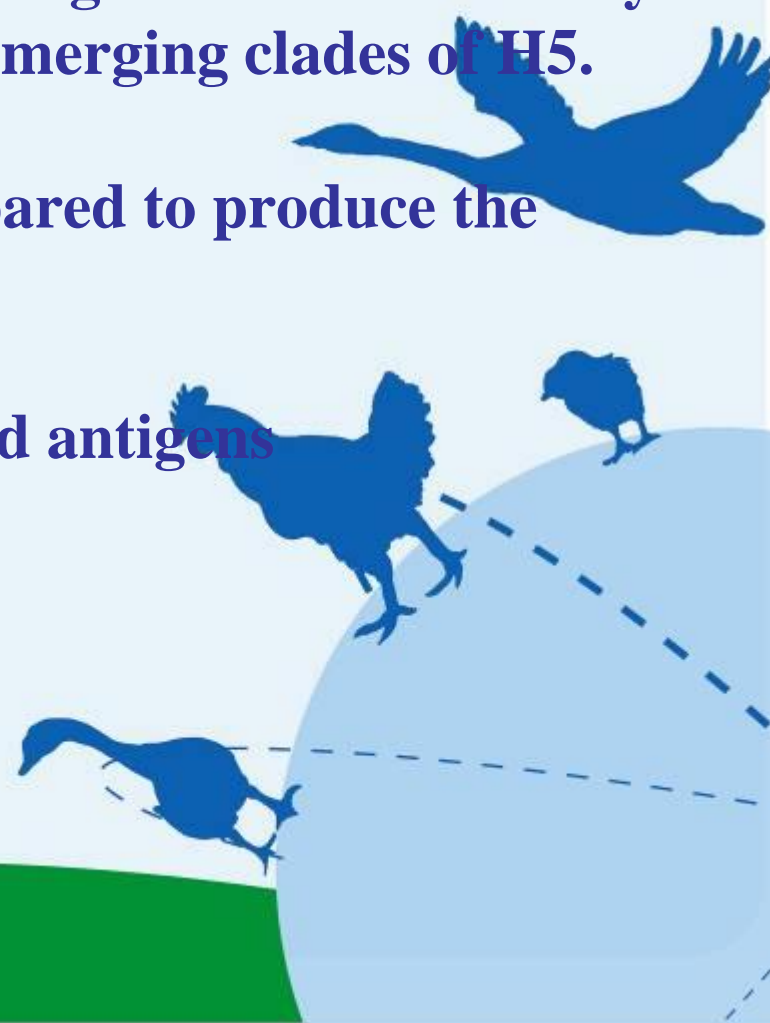
To determine those laboratories prepared to produce the reference sera and start production.

Global distribution reference sera and antigens

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Thank you for your attention

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