

## Summary of status of development and availability of A(H7) candidate vaccine viruses and potency testing reagents\*

26 September 2019

### Candidate vaccine viruses

| Subtype | Antigenic prototype                                                  | Clade    | Candidate vaccine virus | Type of virus or reassortant | Developing Institute | Available from         |
|---------|----------------------------------------------------------------------|----------|-------------------------|------------------------------|----------------------|------------------------|
| H7N1    | A/mallard/Netherlands/12/2000 <sup>#</sup>                           | Eurasian | Wild type virus         |                              |                      | WHO CCs                |
|         |                                                                      |          | NIBRG-63*               | Reverse genetics             | NIBSC, UK            | NIBSC, UK              |
|         | A/turkey/Italy/3889/99                                               | Eurasian | Wild type virus         |                              |                      | NIBSC, UK              |
| H7N2    | A/turkey/Virginia/4529/2002                                          | American | Wild type virus         |                              |                      | WHO CCs                |
|         |                                                                      |          | IBCDC-5*                | Classical reassortant        | CDC, USA             | CDC, USA               |
|         | A/New York/107/2003                                                  | American | Wild type virus         |                              |                      | WHO CCs                |
|         |                                                                      |          | NIBRG-109*              | Reverse genetics             | NIBSC, UK            | NIBSC, UK              |
| H7N3    | A/Canada/rv444/2004                                                  | American | Wild type virus         |                              |                      | WHO CCs                |
|         |                                                                      |          | 161984-B*               | Reverse genetics             | SJCRH, USA           | SJCRH, USA<br>CDC, USA |
|         | A/mallard/Netherlands/12/2000                                        | Eurasian | Wild type virus         |                              |                      | WHO CCs                |
|         |                                                                      |          | NIBRG-60*               | Reverse genetics             | NIBSC, UK            | NIBSC, UK              |
| H7N7    | A/mallard/Netherlands/12/2000<br>and<br>A/mallard/Netherlands/2/2000 | Eurasian | Wild type viruses       |                              |                      | WHO CCs                |
|         |                                                                      |          | IBCDC-1*                | Classical reassortant        | CDC, USA             | CDC, USA               |

<sup>#</sup> HA from A/mallard/Netherlands/12/2000 and NA from A/mallard/Netherlands/2/2000.

\*These viruses are candidate vaccine viruses which have passed relevant safety testing. They can be handled under BSL-2 enhanced containment<sup>1</sup>.

<sup>1</sup> <http://www.who.int/biologicals/publications/trs/areas/vaccines/influenza/Annex%205%20human%20pandemic%20influenza.pdf?ua=1>

## Candidate vaccine viruses in preparation

| Subtype | Antigenic prototype           | Clade    | Developing Institute | Available from |
|---------|-------------------------------|----------|----------------------|----------------|
| H7N4    | A/chicken/Jiangsu/1/2018-like | Eurasian | CCDC, China          | Pending        |

## Reference antigens (freeze-dried)

| Parent virus                  | Starting materials |             | Ref Ag / Lot number | Unitage (µgHA/mL) | Available from |
|-------------------------------|--------------------|-------------|---------------------|-------------------|----------------|
|                               | CVV                | Egg or Cell |                     |                   |                |
| A/mallard/Netherlands/12/2000 | NIBRG-60           | Egg         | 07/336              | 115               | NIBSC, UK      |
| A/New York/107/2003           | NIBRG-109          | Egg         | 08/362              | To be announced   | NIBSC, UK      |

## Sheep antisera

| Purified HA from              |             | Order Lot number | Available from |
|-------------------------------|-------------|------------------|----------------|
| Parent virus                  | Egg or Cell |                  |                |
| A/mallard/Netherlands/12/2000 | Egg         | 07/278           | NIBSC, UK      |
| A/New York/107/2003           | Egg         | 09/148           | NIBSC, UK      |
| A/chick/Italy/1374/99 (H7N1)  | Egg         | 02/294           | NIBSC, UK      |

## Institutes and contact details for candidate vaccine virus orders and other information:

CDC: [dwentworth@cdc.gov](mailto:dwentworth@cdc.gov) (Subject: CVV request)

NIBSC: [standards@nibsc.org](mailto:standards@nibsc.org) or [enquiries@nibsc.org](mailto:enquiries@nibsc.org)

SJCRH: [richard.webby@stjude.org](mailto:richard.webby@stjude.org)

CCDC: [whocc-china@cnic.org.cn](mailto:whocc-china@cnic.org.cn)

WHO CCs: [http://www.who.int/influenza/gisrs\\_laboratory/collaborating\\_centres/list/en/](http://www.who.int/influenza/gisrs_laboratory/collaborating_centres/list/en/)

Candidate vaccine viruses and potency testing reagents for influenza A(H7N9) can be found on the WHO web site at [http://www.who.int/influenza/vaccines/virus/candidates\\_reagents/a\\_h7n9/en/](http://www.who.int/influenza/vaccines/virus/candidates_reagents/a_h7n9/en/)

For information of other type and subtype candidate vaccine viruses and potency testing reagents, please go to: <http://www.who.int/influenza/vaccines/virus/en/>

For general enquiries, please contact [gisrs-whohq@who.int](mailto:gisrs-whohq@who.int)