**Influenza A(H3N2) egg-derived candidate vaccine viruses for development and production of vaccines for use in the 2019-20 northern hemisphere influenza season**

Antigenic and genetic analyses are performed by the WHO Collaborating Centres of the Global Influenza Surveillance and Response System (GISRS). Unless otherwise indicated all candidate vaccine viruses posted on this table have passed two-way haemagglutination inhibition (HI) test. National or regional control authorities\(^1\) approve the composition and formulation of vaccines used in each country.

21 March 2019 *(updated on 28 March 2019)*

**Candidate vaccine viruses (antigenically like A/Kansas/14/2017)**

<table>
<thead>
<tr>
<th>Parent virus</th>
<th>Candidate vaccine virus</th>
<th>Type of virus or reassortant</th>
<th>Developing institute</th>
<th>Available from</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/Kansas/14/2017</td>
<td>Wild type virus</td>
<td>NYMC</td>
<td>CDC, USA NIBSC, UK VIDRL, Australia</td>
<td></td>
</tr>
<tr>
<td>X-327</td>
<td>Classical</td>
<td>NYMC</td>
<td>NIBSC, UK NYMC, USA</td>
<td></td>
</tr>
<tr>
<td>IVR-195*</td>
<td>Classical</td>
<td>Seqirus</td>
<td>VIDRL</td>
<td></td>
</tr>
</tbody>
</table>

*New CVV is shown in blue*

Institutes contact details for candidate vaccine virus orders/information:

CDC: xxu@cdc.gov (Subject: CVV request)

CCDC: whocc-china@cnic.org.cn

FCI: whocc@crick.ac.uk

NIBSC: standards@nibsc.org or enquiries@nibsc.org

NIID: flu-vaccine@nih.go.jp

NYMC: doris_bucher@nymc.edu

VIDRL: whoflu@influenzacentre.org

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\(^1\) [http://www.who.int/immunization_standards/national_regulatory_authorities%20/offices/en/](http://www.who.int/immunization_standards/national_regulatory_authorities%20/offices/en/)
Reference antigens (freeze-dried) – To be updated

<table>
<thead>
<tr>
<th>Parent virus</th>
<th>Starting materials</th>
<th>Ref Ag Lot number</th>
<th>Unitage (µgHA/ml)</th>
<th>Available from</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Candidate vaccine virus</td>
<td>Egg or cell</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sheep Antisera – To be updated

<table>
<thead>
<tr>
<th>Purified HA from</th>
<th>Order Lot number</th>
<th>Available from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent virus</td>
<td>Egg or cell</td>
<td></td>
</tr>
</tbody>
</table>

The above-listed potency testing reagents are developed with support from manufacturers, and calibrated by the WHO Essential Regulatory Laboratories (ERLs) of the Global Influenza Surveillance and Response System (GISRS).

ERLs contact details for reagents orders/information:
NIBSC: standards@nibsc.org or enquiries@nibsc.org
NIID: flu-vaccine@nih.go.jp
TGA: influenza.reagents@health.gov.au

For other candidate vaccine viruses and potency testing reagents, please go to http://www.who.int/influenza/vaccines/virus/candidates_reagents/home/en/

For general enquiries, please contact gisrs-whohq@who.int