

# Influenza B Victoria lineage egg-derived<sup>1</sup> candidate vaccine viruses for development and production of vaccines for use in the 2020-2021 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 approve the composition and formulation of vaccines used in each country.<sup>2</sup>

**28 February 2020 (Last updated on 12 June 2020)**

## Candidate vaccine viruses (antigenically like B/Washington/02/2019)

| Parent virus                     | Candidate vaccine virus | Type of virus or reassortant | Developing institute | Available from                                                         |
|----------------------------------|-------------------------|------------------------------|----------------------|------------------------------------------------------------------------|
| <b>B/Hong Kong/574/2019</b>      | Wild type virus         |                              |                      | WHO CCs                                                                |
|                                  | <b>BX-87C*</b>          | Classical                    | NYMC                 | NYMC, USA                                                              |
| <b>B/Washington/02/2019</b>      | Wild type virus         |                              |                      | WHO CCs<br>NIBSC, UK                                                   |
|                                  | <b>BX-85C</b>           | Classical                    | NYMC                 | NYMC, USA<br>NIBSC, UK                                                 |
| <b>B/Brisbane/35/2018</b>        | Wild type virus         |                              |                      | NIBSC, UK                                                              |
| <b>B/Victoria/705/2018</b>       | Wild type virus         |                              |                      | NIBSC, UK                                                              |
|                                  | <b>BVR-11</b>           | Classical                    | VIDRL                | CCDC, China<br>FCI, UK<br>NIBSC, UK<br>NIID, Japan<br>VIDRL, Australia |
| <b>B/Sichuan-Gaoxin/531/2018</b> | Wild type virus         |                              |                      |                                                                        |
|                                  | <b>BX-83A</b>           | Classical                    | NYMC                 | CCDC, China<br>NYMC, USA                                               |
|                                  | <b>CNIC-1906</b>        | Classical                    | CCDC                 | CCDC, China<br>FCI, UK<br>NIBSC, UK<br>NIID, Japan<br>VIDRL, Australia |

\* New CVV

<sup>1</sup> For cell-derived candidate vaccine viruses and reference reagents please see

[https://www.who.int/influenza/vaccines/virus/candidates\\_reagents/home/en/](https://www.who.int/influenza/vaccines/virus/candidates_reagents/home/en/)

<sup>2</sup> [https://www.who.int/immunization\\_standards/national\\_regulatory\\_authorities%20/offices/](https://www.who.int/immunization_standards/national_regulatory_authorities%20/offices/)

### Institutes contact details for candidate vaccine viruses orders/information:

**CCDC:** [whocc-china@cnic.org.cn](mailto:whocc-china@cnic.org.cn)  
**CDC:** [dwentworth@cdc.gov](mailto:dwentworth@cdc.gov) (Subject: CVV request)  
**FCI:** [whocc@crick.ac.uk](mailto:whocc@crick.ac.uk)  
**NIBSC:** [standards@nibsc.org](mailto:standards@nibsc.org) or [enquiries@nibsc.org](mailto:enquiries@nibsc.org)  
**NIID:** [flu-vaccine@nih.go.jp](mailto:flu-vaccine@nih.go.jp)  
**NYMC:** [doris\\_bucher@nymc.edu](mailto:doris_bucher@nymc.edu)  
**VIDRL:** [whoflu@influenzacentre.org](mailto:whoflu@influenzacentre.org)  
**WHO CCs:** [http://www.who.int/influenza/gisrs\\_laboratory/collaborating\\_centres/list/en/](http://www.who.int/influenza/gisrs_laboratory/collaborating_centres/list/en/)

### Reference antigens (freeze-dried)

| Parent virus         | Starting materials            |             | Ref Ag<br>Lot number | Unitage<br>(µg HA/ml) | Available<br>from |
|----------------------|-------------------------------|-------------|----------------------|-----------------------|-------------------|
|                      | Candidate<br>vaccine<br>virus | Egg or cell |                      |                       |                   |
| B/Washington/02/2019 | Wild type                     | Egg         | 19/190               | 52 µg/ml              | NIBSC, UK         |
|                      |                               |             | B(v)-Ag-1912         | 77 µg/ml              | CBER/FDA, USA     |
|                      |                               |             | 19/238               | 76 µg/ml              | NIBSC, UK         |
| B/Victoria/705/2018  | BVR-11                        | Egg         | 19/208               | 79 µg/ml              | NIBSC, UK         |
|                      |                               |             | 2019/130B            | 89 µg/ml              | TGA, Australia    |
| B/Darwin/7/2019      | Wild type                     | Cell        | <b>B(v)-Ag-2002*</b> | 41 µg/vial            | CBER/FDA, USA     |
|                      |                               | Cell        | 19/210               | 44 µg/ml              | NIBSC, UK         |

\* new reagents

### Sheep antisera

| Purified HA from            |             | Order<br>Lot number | Available from |
|-----------------------------|-------------|---------------------|----------------|
| Parent virus                | Egg or Cell |                     |                |
| B/Washington/02/2019 – like | Egg         | 19/218              | NIBSC, UK      |
|                             |             | B(v)-Ab-1914        | CBER/FDA, USA  |
|                             |             | AS436               | TGA, Australia |

The above-listed potency testing reagents have been 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:

**CBER/FDA:** [CBERShippingRequests@fda.hhs.gov](mailto:CBERShippingRequests@fda.hhs.gov)  
**NIBSC:** [standards@nibsc.org](mailto:standards@nibsc.org) or [enquiries@nibsc.org](mailto:enquiries@nibsc.org)  
**NIID:** [flu-vaccine@nih.go.jp](mailto:flu-vaccine@nih.go.jp)

**TGA:** [influenza.reagents@health.gov.au](mailto:influenza.reagents@health.gov.au)

The list of all WHO Collaborating Centres (CCs) and Essential Regulatory Laboratories (ERLs) for influenza can be found on the WHO web site at

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

For other candidate vaccine viruses and potency testing reagents, please go to

[http://www.who.int/influenza/vaccines/virus/candidates\\_reagents/home/en/](http://www.who.int/influenza/vaccines/virus/candidates_reagents/home/en/)

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