Summary of status of development and availability of variant[1] influenza A(H1) candidate vaccine viruses and potency testing reagents

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

27 February 2026

Candidate vaccine viruses*

Antigenic prototype	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/California/71/2021 (H1N2)v	**Wild type virus**			CDC, USA
	IDCDC-RG90A	Reverse genetics	CDC, USA	
A/Wisconsin/03/2021 (H1N1)v	Wild type virus			CDC, USA
	IDCDC-RG76A*	Reverse genetics	CDC, USA	CDC, USA
A/Bretagne/24241/2021 (H1N2)v	Wild type virus			FCI, UK
	NIB-131C⁺	Conventional reassortant	MHRA,UK	MHRA, UK
A/Hessen/47/2020 (H1N1)v	Wild type virus			FCI, UK
	NIB-124C⁺	Conventional reassortant	MHRA,UK	MHRA, UK
A/Michigan/383/2018 (H1N2)v	Wild type virus			WHO CCs
	IDCDC-RG58A*	Reverse genetics	CDC, USA	CDC, USA
A/Ohio/24/2017 (H1N2)v	Wild type virus			CDC, USA
	IDCDC-RG59*	Reverse genetics	CDC, USA	CDC, USA
A/Ohio/9/2015 (H1N1)v	Wild type virus			WHO CCs
	IDCDC-RG48A*	Reverse genetics	CDC, USA	CDC, USA
A/Hunan/42443/2015 (H1N1)v	Wild type virus			WHO CCs
	CNIC-1601*	Conventional reassortant	CCDC, China	CCDC, China

**These viruses are candidate vaccine viruses which have passed relevant safety testing. They can be handled under BSL-2 enhanced containment[2].*

⁺These low pathogenic viruses have not undergone safety testing and should be handled according to local risk assessment.

[1] *Joint FAO, OIE, WHO announcement of the standardization of influenza virus variants infecting humans: https://cdn.who.int/media/docs/default-source/influenza/global-influenza-surveillance-and-response-system/nomenclature/standardization_of_terminology_influenza_virus_variants_update.pdf?sfvrsn=d201f1d5_6*

[2] *Guidelines for the safe development and production of vaccines to human pandemic influenza viruses and influenza viruses with pandemic potential, Annex 3, TRS No 1016 (who.int)*

Candidate vaccine viruses in preparation

Antigenic prototype	Type of virus or reassortant	Developing Institute	Status
A/Pennsylvania/27/2024 (H1N2)v	Reverse genetics	CDC, USA	**Pending**
	Classical reassortant	MHRA, UK	**Pending**
A/Catalonia/NSAV198289092/2023 (H1N1)v	Reverse genetics	MHRA, UK	**Pending**
A/England/234600203/2023 (H1N2)v	Reverse genetics	MHRA, UK	**Pending**
A/Bretagne/24241/2021 (H1N2)v	Reverse genetics	SJCRH, USA	**Pending**
A/Netherlands/10370-1b/2020 (H1N1)v	Reverse genetics	MHRA, UK	**Pending**
A/Ohio/35/2017 (H1N2)v	Reverse genetics	MHRA, UK	**Pending**
A/Iowa/32/2016 (H1N2)v	Reverse genetics	CDC, USA	**Pending**

Institutes contact details for candidate vaccine viruses orders/information:
CCDC: fluchina@ivdc.chinacdc.cn
CDC: cvvrequest@cdc.gov (Subject: CVV request)
MHRA: standards@mhra.gov.uk or enquiries@mhra.gov.uk
SJCRH: Richard.webby@stjude.org

WHO CCs: https://www.who.int/initiatives/global-influenza-surveillance-and-response-system/who-collaboration-center-erl?CxitPEOtTWx0xUd5TJdODSXcnyJqzYd7FZeivpn7xcI=

Reference antigens (freeze dried)

Starting materials		Ref Ag Lot Number	Unitage (µgHA/ml)	Available from
Parent virus	CVV			
A/Wisconsin/03/2021 (H1N1v)	SeqHS_SVR-04	H1-Ag-2408 (cell)	93	CBER/FDA, USA
A/Michigan/383/2018 (H1N2v)	SeqHSSVR01	H1-Ag-2310 (cell)	87	CBER/FDA, USA

Sheep antisera

Parent virus	Order Lot Number	Available from
A/Wisconsin/03/2021 (H1N1v)	**H1-Ab-2505***	CBER/FDA, USA
A/Michigan/383/2018 (H1N2v)	H1-Ab-2414*	CBER/FDA, USA

Purified rHA used as immunogen

WHO Essential Regulatory Laboratories (ERLs) contact details for reagent orders and other information:

For reagents available from **CBER**, email CBERShippingRequests@fda.hhs.gov

For information of other type and subtype candidate vaccine viruses and potency testing reagents, please go to: https://www.who.int/teams/global-influenza-programme/vaccines/who-recommendations/zoonotic-influenza-viruses-and-candidate-vaccine-viruses

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