

# DRAFT landscape of COVID-19 candidate vaccines – 20 March 2020

## 2 candidate vaccines in clinical evaluation

Platform	Type of candidate vaccine	Developer	Coronavirus target	Current stage of clinical evaluation/regulatory status- Coronavirus candidate	Same platform for non-Coronavirus candidates
Non-Replicating Viral Vector	Adenovirus Type 5 Vector	CanSino Biological Inc. and Beijing Institute of Biotechnology	COVID-19	Phase 1 <a href="#">ChiCTR2000030906</a>	Ebola
RNA	LNP-encapsulated mRNA	Moderna/NIAID	COVID-19	Phase 1 <a href="#">NCT04283461</a>	multiple candidates

## 42 candidate vaccines in clinical evaluation

Platform	Type of candidate vaccine	Developer	Coronavirus target	Current stage of clinical evaluation/regulatory status- Coronavirus candidate	Same platform for non-Coronavirus candidates
DNA	DNA plasmid vaccine Electroporation device	Inovio Pharmaceuticals	COVID-19	Pre-Clinical	Lassa, Nipah HIV Filovirus HPV Cancer indications Zika Hepatitis B
DNA	DNA	Takis/Applied DNA Sciences/Evvivax	COVID-19	Pre-Clinical	
DNA	DNA plasmid vaccine	Zydus Cadila	COVID-19	Pre-Clinical	
Inactivated	Formaldehyde-inactivated + alum	Sinovac	COVID-19	Pre-Clinical	SARS
Live Attenuated Virus	Deoptimized live attenuated vaccines	Codagenix/Serum Institute of India	COVID-19	Pre-Clinical	HAV, InfA, ZIKV, FMD, SIV, RSV, DENV

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Non-Replicating Viral Vector	MVA encoded VLP	GeoVax/BravoVax	COVID-19	Pre-Clinical	LASV, EBOV, MARV, HIV
Non-Replicating Viral Vector	Ad26 (alone or with MVA boost)	Janssen Pharmaceutical Companies	COVID-19	Pre-Clinical	Ebola, HIV, RSV
Non-Replicating Viral Vector	ChAdOx1	University of Oxford	COVID-19	Pre-Clinical	influenza, TB, Chikungunya, Zika, MenB, plague
Non-Replicating Viral Vector	adenovirus-based NasoVAX expressing SARS2-CoV spike protein	Altimmune	COVID-19	Pre-Clinical	influenza
Non-Replicating Viral Vector	Ad5 S (GREVAX™ platform)	Greffex	COVID-19	Pre-Clinical	MERS
Non-Replicating Viral Vector	Oral Vaccine platform	Vaxart	COVID-19	Pre-Clinical	InfA, CHIKV, LASV, NORV; EBOV, RVF, HBV, VEE
Protein Subunit	Drosophila S2 insect cell expression system VLPs	Expres2ion	COVID-19	Pre-Clinical	
Protein Subunit	S protein	WRAIR/USAMRIID	COVID-19	Pre-Clinical	
Protein Subunit	S-Trimer	Clover Biopharmaceuticals Inc./GSK	COVID-19	Pre-Clinical	HIV, REV Influenza
Protein Subunit	Peptide	Vaxil Bio	COVID-19	Pre-Clinical	
Protein Subunit	S protein	AJ Vaccines	COVID-19	Pre-Clinical	

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Protein Subunit	li-Key peptide	Generex/EpiVax	COVID-19	Pre-Clinical	Influenza, HIV, SARS-CoV
Protein Subunit	S protein	EpiVax/Univ. of Georgia	COVID-19	Pre-Clinical	H7N9
Protein Subunit	S protein (baculovirus production)	Sanofi Pasteur	COVID-19	Pre-Clinical	Influenza, SARS-CoV
Protein Subunit	Full length S trimers/ nanoparticle + Matrix M	Novavax	COVID-19	Pre-Clinical	RSV; CCHF, HPV, VZV, EBOV
Protein Subunit	gp-96 backbone	Heat Biologics/Univ. Of Miami	COVID-19	Pre-Clinical	NSCLC, HIV, malaria, Zika
Protein Subunit	Molecular clamp stabilized Spike protein	University of Queensland/GSK	COVID-19	Pre-Clinical	Nipah, influenza, Ebola, Lassa
Protein Subunit	S1 or RBD protein	Baylor College of Medicine	COVID-19	Pre-Clinical	SARS
Protein Subunit	Subunit protein, plant produced	iBio/CC-Pharming	COVID-19	Pre-Clinical	
Protein Subunit	Subunit	VIDO-InterVac, University of Saskatchewan	COVID-19	Pre-Clinical	
Protein Subunit	Adjuvanted microsphere peptide	University of Saskatchewan	COVID-19	Pre-Clinical	
Replicating Viral Vector	Measles Vector	Zyudus Cadila	COVID-19	Pre-Clinical	

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Replicating Viral Vector	Measles Vector	Institute Pasteur/Themis/Univ. of Pittsburg Center for Vaccine Research	COVID-19	Pre-Clinical	West Nile, Chik, Ebola, Lassa, Zika
Replicating Viral Vector	Horsepox vector expressing S protein	Tonix Pharma/Southern Research	COVID-19	Pre-Clinical	Smallpox, monkeypox
RNA	LNP-encapsulated mRNA cocktail encoding VLP	Fudan University/Shanghai JiaoTong University/RNACure Biopharma	COVID-19	Pre-Clinical	
RNA	LNP-encapsulated mRNA encoding RBD	Fudan University/Shanghai JiaoTong University/RNACure Biopharma	COVID-19	Pre-Clinical	
RNA	mRNA	China CDC/Tongji University/Stermina	COVID-19	Pre-Clinical	
RNA	mRNA	Arcturus/Duke-NUS	COVID-19	Pre-Clinical	multiple candidates
RNA	mRNA	BioNTech/Fosun Pharma/Pfizer	COVID-19	Pre-Clinical	
RNA	saRNA	Imperial College London	COVID-19	Pre-Clinical	EBOV; LASV, MARV, Inf (H7N9), RABV
RNA	mRNA	Curevac	COVID-19	Pre-Clinical	RABV, LASV, YFV; MERS, InfA, ZIKV, DengV, NIPV
VLP	Plant-derived VLP	Medicago Inc.	COVID-19	Pre-Clinical	Flu, Rotavirus, Norovirus, West Nile virus, Cancer
Unknown	Unknown	University of Hong Kong	COVID-19	Pre-Clinical	
Unknown	Unknown	ImmunoPrecise	COVID-19	Pre-Clinical	
Unknown	Unknown	MIGAL Galilee Research Institute	COVID-19	Pre-Clinical	
Unknown	Unknown	Doherty Institute	COVID-19	Pre-Clinical	
Unknown	Unknown	Tulane University	COVID-19	Pre-Clinical	

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