

GeoVax has 3-4 Vaccine Candidates in development to respond to the COVID-19 Pandemic. Here is some of the media coverage.

Print:

[A COVID-19 Vaccine, Outsourcing, And Made In The USA](#)



Developing Covid-19 Vaccines at Pandemic Speed - GeoVax listed- Nonreplicating Vector

Vaccine Platforms, Their Attributes, and the Status of Vaccine Candidates.*						
Technology	Attributes				Candidates in Preclinical Development	Candidates in Human Trials
	Single Dose	Licensed Platform	Speed	Current Scale		
DNA	No	No	Fast	Medium	Takis/Applied DNA Sciences/Evvivax Zydus Cadila	Inovio Pharmaceuticals, Phase 1 (NCT04336410)
Inactivated	No	Yes	Medium	Medium to high		Sinovac, Phase 1 (NCT04352608) Inactivated Beijing Institute of Biological Sciences/Wuhan Institute of Biological Sciences, Phase 1 (ChiCTR2000031809)
Live attenuated	Yes	Yes	Slow	High	Codagenix/Serum Institute of India	
Nonreplicating vector	Yes	No	Medium	High	GeoVax/BravoVax Janssen Pharmaceutical Companies Altimmune Greffex Vaxart ExpresS2ion	CanSino Biologics, Phases 1 and 2 (ChiCTR2000030906 and ChiCTR2000031781) University of Oxford, Phase 1/2 (NCT04324606)
Protein subunit	No	Yes	Medium to fast	High	WRAIR/U.S. Army Medical Research Institute of Infectious Diseases Clover Biopharmaceuticals Inc./GSK Vaxil Bio AJ Vaccines Genrex/EpiVax/University of Georgia Sanofi Pasteur Novavax Heat Biologics/University of Miami University of Queensland/GSK/ Baylor College of Medicine iBio/CC- Pharming	
Replicating viral vector	Yes	Yes	Medium	High	Zydus Cadila Institut Pasteur/Themis Tonix Pharma/Southern Research	
RNA	No	No	Fast	Low to medium	Fudan University/Shanghai JiaoTong University/RNACure Biopharma China CDC/Tongji University/Stermina Arcturus/Duke-NUS Imperial College London Curevac BioNTech/Pfizer	Moderna/NIAID (NCT04283461)
Uncertain					University of Pittsburgh University of Saskatchewan ImmunoPrecise MIGAL Galilee Research Institute Doherty Institute Tulane University	

[COVID-19 Vaccine Development: An Interview With GeoVax](#)



[In the race to treat COVID-19, Georgia companies stake a claim](#)



[GeoVax Progresses in Coronavirus \(COVID-19\) Vaccine Development Program](#)



Asia Deal Watch: China's BravoVax, US-based GeoVax Team Up On Coronavirus Vaccine - Paywall



The race to stop COVID-19 - GeoVax listed here

INFOGRAPHIC

THE RACE TO STOP COVID-19

As a new strain of coronavirus threatens public health systems across the globe, researchers are racing to develop a vaccine.

DAWN CONNELLY & JULIA ROBINSON

In context

Compared with some outbreaks of novel respiratory diseases, the death rate for coronavirus disease 2019 (COVID-19) is currently low. The speed of its spread as the global outbreak progresses and milder cases are detected. Pandemic H1N1 2009 influenza was estimated to infect 10 billion people, with a death rate of 1 in 15,000 (0.0067%). Seasonal flu has a similar death rate, but infects up to a billion.

Year	Strain	Death rate
2009	H1N1	0.0067%
2009	MERS*	34.4%
Ongoing	COVID-19	3.8%

**Some non-respiratory pathogens - 34.4% of cases are fatal.*

Case fatality rates for COVID-19

By age:

By comorbidity conditions:

Condition	Rate
Cardiovascular disease	10.4%
Diabetes	7.1%
Chronic respiratory disease	6.3%
Hypertension	6.0%
Cancer	5.4%
None	0.8%

By gender:
Males: 2.8%
Females: 1.7%

Global takeover

Symptoms and transmission

- Common symptoms: fever (80%), weakness (69%), cough (68%), muscle pain (64%), diarrhea (64%), stomach pain (22%), dizziness (20%), nausea and vomiting (10%).
- Incubation period: 0 - 14 days.
- Severity: Data from 14,000 cases of COVID-19 in China suggest that 80% of cases are mild, 13.8% are severe and 4.7% are critical. Severe cases are more prevalent in older people and those with an existing long-term condition, such as cardiovascular disease, diabetes, respiratory disease or hypertension.
- Transmission: person-to-person spread, between close contacts (8 metres) through respiratory droplets.
- Diagnosis: COVID-19 is suspected based on clinical symptoms and relevant travel history or close contact with infected individuals. Cases are only confirmed when there is a positive laboratory test.
- Treatment: treatment of COVID-19 is symptomatic, such as providing oxygen. Medicines specifically licensed for COVID-19 are not currently available, but clinical trials of several antiviral drugs are being conducted in China.

Vaccine development

There are five main approaches being taken to develop a vaccine against SARS-CoV-2, with several biotechnology companies, academic organisations and pharmaceutical companies employing different technologies in the race to bring their vaccine candidate to clinical trials. The World Health Organisation (WHO) hopes that a vaccine will be available by October 2020.

- Viral vector vaccine:**
 - Organisations working on vaccine: Johnson & Johnson, GlaxoSmithKline, AstraZeneca, Novartis, Moderna, CureVac, Inovio, and others.
 - Estimated date of first human trials: June 2020.
- DNA vaccine:**
 - Organisations working on vaccine: Inovio Pharmaceuticals, Beijing Inovo Biotechnology, Applied DNA Sciences, Takeda Pharmaceutical, and others.
 - Estimated date of first human trials: April 2020.
- RNA vaccine:**
 - Organisations working on vaccine: CureVac, Moderna and US National Institute of Allergy and Infectious Diseases, Biogen, Therapeutics, Targis University, and others.
 - Estimated date of first human trials: April 2020.
- Live-attenuated vaccine:**
 - Organisations working on vaccine: Codigene with Serum Institute of India.
 - Estimated date of first human trials: By August 2020.
- Protein-based vaccine:**
 - Organisations working on vaccine: Novartis, Clover Biopharmaceuticals with GSK, Baylor College of Medicine, University of Texas Medical Branch, New York Blood Center and Fudan University, China University of Beikang, Canada, University of Queensland, Australia, and Dynavax, Vaxart, Genentech, Emergent, Vaxil Bio, Sanofi Pasteur, BioCr, Pharming.
 - Estimated date of first human trials: By June 2020.

Immune response

It is not known how strong the immune response needs to be to protect against SARS-CoV-2; therefore, some of the vaccines being developed may not work.

Before candidates reach clinical trials, investigators must also ensure they include protective elements, not immunomodulators, as was seen in early attempts to develop a SARS-CoV vaccine after it emerged in 2002.

INFOGRAPHIC: Dawn Connelly & Julia Robinson. COVID-19: The Race to Stop COVID-19. The Pharmaceutical Journal. March 2020.

Landscape of COVID-19 candidate vaccines

