



## BFPG Explainers: COVID-19 and cooperation on vaccines

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### Which countries are currently working on a vaccine?

As of 21st March, there were 48 vaccine candidates in preclinical evaluation, and two in clinical evaluation.<sup>i</sup> A range of companies and academic institutions across the world are all working to develop a vaccine to immunize against COVID-19, including universities in the UK, Australia, Canada, the US and Hong Kong.

In the UK, Prime Minister Boris Johnson has announced record UK aid funding to find a coronavirus vaccine, announcing a further £210 million to the international coalition to find a vaccine, the Coalition for Epidemic Preparedness Innovations (CEPI). Scientists at the University of Oxford are amongst those working to find a coronavirus vaccine.<sup>ii</sup>

In China, 1000 scientists are at work on a vaccine. Researchers affiliated with the Academy of Military Medical Sciences have developed what is considered the nation's front-runner candidate for success and is recruiting volunteers for clinical trials.<sup>iii</sup>

### When is a vaccine likely to be ready for use?

As an optimistic estimate, a vaccine likely remains 12 to 18 months away. Ana Maria Henao-Restrepo, a senior researcher at the World Health Organization (WHO), has said that it would be 'historic' to find a vaccine that can be distributed to all countries in 18 months to defeat the coronavirus.<sup>iv</sup>

Annelies Wilder-Smith, professor of emerging infectious diseases at the London School of Hygiene and Tropical Medicine has warned that 18 months is already 'extremely fast' and is only possible with no glitches.<sup>v</sup>

## Has there been any cooperation on developing a vaccine?

The WHO follows the progress of all prospective vaccines that are being developed.

The first important international cooperation on developing a vaccine to stop the coronavirus came from China, who rapidly and openly shared the genomic sequence of the virus. Initially, however, Chinese officials had reprimanded Dr Li Wenliang, who had tried to ring early alarms that a cluster of infections could spin out of control. Nonetheless, the sharing of the genomic sequence has been a boon for researchers working against the clock to produce a preventative vaccine for COVID-19, as well as for other treatments and diagnostics.<sup>vi</sup>

There is cooperation on many levels – including among companies that are ordinarily fierce competitors. In the US, for example, President Donald Trump has met executives of leading pharmaceutical companies to discuss their cooperation, including Gilead Sciences Inc, Regeneron Pharmaceuticals Inc, Moderna Inc and GlaxoSmithKline Plc.<sup>vii</sup>

Following the Ebola crisis in West Africa from 2014-16, mostly European countries including the UK and Norway, along with the Bill and Melinda Gates Foundation amongst others, began contributing millions of dollars to CEPI, a multinational organization to fund vaccine research. The Coalition in the past two months has funded research into eight of the most promising candidates to block the coronavirus.<sup>viii</sup>

## Will there be inequalities of access to the vaccine?

Given the nature of the coronavirus and the global demand for a vaccine, it is likely that demand will vastly outstrip supply. In the UK, it is likely that the government would prioritise vaccinating health and social care workers, along with those considered 'high risk'. However, globally, competition for a vaccine will likely create inequalities of access to the vaccine. This is especially true for countries with weak or non-existent healthcare systems, where those with greater purchasing power are more likely to be able to access a vaccine than poorer citizens.

The WHO convenes governments, charities and vaccine producers to agree an equitable global distribution strategy, but it is unclear whether these discussions will carry much weight during the crisis and urgency of a pandemic. WHO discussions and resolutions are not legally binding.

## Are there any problems with vaccine competition?

Hanging over efforts to make a vaccine is the shadow of nationalism – whichever country develops the first vaccine will have the opportunity to favour its own population and thus gain the upper hand in dealing with the economic and geostrategic implications of the crisis. Any new vaccine that proves potent against the coronavirus is likely to be in short supply, and hence there is likely to be fierce competition over its production. Ultimately, national political leaders would prefer to not be beholden to a foreign power, particularly a competitor or hostile state, for access to the vaccine that is needed during this crisis.

Nations housing vaccine production have, in the past, put in place measures to ensure ‘biomedical security’ in upholding national preference. In 2009, during the swine flu epidemic, a company in Australia that was among the first to develop a single-dose vaccine was required to satisfy demand in Australia before fulfilling export orders to the US and elsewhere.

American President Donald Trump, for example, has talked in meetings with pharmaceutical executives about making sure a vaccine is produced on American soil, to assure the US controls its supplies.<sup>ix</sup> The United States stirred controversy by allegedly offering \$1 billion to a German pharmaceutical company to buy monopoly rights to a new Covid-19 vaccine. German government officials alleged that President Trump had sought to lure German company CureVac to undertake its research and production in the US. Whilst CureVac denied it had received a takeover offer, its lead investigator made clear that an approach had taken place.<sup>x</sup>

This rumour in turn led the European Commission to retaliate, pledging 80 million euros to the firm, which already receives support from the European vaccine consortium.<sup>xi</sup> That same day, a Chinese company offered \$133.3 million for an equity stake in a different German firm in the vaccine race, BioNTech.

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<sup>i</sup><https://www.who.int/blueprint/priority-diseases/key-action/novel-coronavirus-landscape-ncov-21march2020.PDF?ua=1>

<sup>ii</sup><https://www.gov.uk/search/news-and-communications?keywords=&organisations%5B%5D=department-for-international-development>

<sup>iii</sup><https://www.clinicaltrialsarena.com/news/china-launches-coronavirus-vaccine-clinical-trials/>

<sup>iv</sup><https://www.euractiv.com/section/coronavirus/interview/who-expert-finding-and-distributing-covid-19-vaccine-in-18-months-would-be-historic/>

<sup>v</sup><https://www.theguardian.com/world/2020/mar/27/coronavirus-vaccine-when-will-it-be-ready>

<sup>vi</sup><https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>

<sup>vii</sup><https://www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-7/>

<sup>viii</sup><https://cepi.net/covid-19/>

<sup>ix</sup><https://www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-7/>

<sup>x</sup><https://sciencebusiness.net/news/eu-offers-eu80m-support-german-covid-19-vaccine-developer-reportedly-pursued-trump>

<sup>xi</sup>[https://ec.europa.eu/commission/presscorner/detail/en/IP\\_20\\_474](https://ec.europa.eu/commission/presscorner/detail/en/IP_20_474)