

# Covid-19 drugs and vaccines: big money and winning alliances

The market for covid-19 drugs and vaccines is huge, involving billions of patients, with tens of billions of dollars potentially up for grabs. Business as usual? Not quite.

The covid-19 pandemic led to numerous clinical trials of many existing drugs in 2020, investigation of existing drugs being just about the only possible short-term pharmaceutical research strategy (see “Waste in covid-19 clinical trials” p. 164). The most famous drug, *hydroxychloroquine*, was ordered in massive quantities (29 million tablets) by the United States. But the use of and the market for this drug rapidly dwindled due to the lack of solid evidence of its efficacy. The European Commission struck a €1 billion deal for orders of the antiviral drug *remdesivir* at a time when the pharmaceutical company already knew that the drug was of little or no benefit to patients, given the results of the “Solidarity” clinical trial. Europe took a gamble, but it was the drug company that hit the jackpot.

The world's top three vaccine producers in 2020 were GlaxoSmithKline, Merck and Sanofi. Their candidate vaccines are nowhere near ready as of early 2021, yet four vaccines have already been authorised in the European Union, and several others are on the way.

The arrival of the first messenger RNA vaccines has surpassed all expectations in terms of speed to market and efficacy. This new type of vaccine has its origins in research conducted in universities and small biotech companies, in particular in the United States and Germany. In these two countries, drug companies received hundreds of millions in public funding in 2020, and pre-orders for hundreds of millions of doses from around the world guaranteed a financially viable market for their products.

Some pharmaceutical companies used their association with public institutions to good advantage, such as AstraZeneca with the University of Oxford or Moderna with the US National Institutes of Health. Pfizer, the world's 4<sup>th</sup> leading vaccine manufacturer, played its cards well by allying itself with BioNTech, a young German company that was leading the field in research on mRNA vaccines.

The covid-19 pandemic greatly accelerated vaccine development, thanks to the efforts of many public and private-sector organisations, and the injection of considerable sums of public money. The usual leaders in this field, in particular major pharmaceutical companies, did not play a central role, although a few of them managed to forge winning alliances. Perhaps this will in turn spur debate over the current healthcare research model and the role best suited to the various players.

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