# COVID-19 Drug Development Trends

## Lead compounds

Several drugs such as **chloroquine**, **arbidol**, **remdesivir**, and **favipiravir**are currently undergoing clinical studies to test their efficacy and safety in the treatment of coronavirus disease 2019 (COVID-19) in China

<https://www.ncbi.nlm.nih.gov/pubmed/32147628>

## Remdesivir

4/17/2020

Remdesivir, a nucleoside analog that functions as an RNA chain terminator, was subsequently found to inhibit replication of other RNA viruses, including coronaviruses. The drug, made by Gilead Sciences, is the focus of multiple trials worldwide and is closely watched by the public health and financial communities.

Earlier this week, The New England Journal of Medicine published a [paper](https://www.nejm.org/doi/full/10.1056/NEJMoa2007016)on remdesivir. At this writing, the market is moving in part as a result of a [news report](https://www.statnews.com/2020/04/16/early-peek-at-data-on-gilead-coronavirus-drug-suggests-patients-are-responding-to-treatment/) based on fragmentary information from the University of Chicago cohort in two Gilead phase III studies.

<https://cancerletter.com/articles/20200417_1/>

## tocilizumab (Actimra)

4/17/2020

a “[compassionate use](https://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=CDR0000046526&version=Patient&language=en)” protocol for the drug [tocilizumab (Actimra)](https://www.cancer.gov/about-cancer/treatment/drugs/tocilizumab) in cancer patients with COVID-19 who have severe respiratory complications thought to be caused by a hyperactive immune response known as [cytokine release syndrome](https://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=CDR0000791353&version=Patient&language=en).

The protocol—which will make the drug available to up to 200 patients who are not able to enroll in an ongoing [phase III clinical trial](https://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=CDR0000045833&version=Patient&language=en) of the drug being run by the drug’s manufacturer, Genentech—was written in 4 days by NCI investigators.

<https://www.cancer.gov/news-events/cancer-currents-blog/2020/covid-19-cancer-nci-response?cid=eb_govdel>

## favipiravir (Avigan)

4/16/2020

**Favipiravir**, which **Fujifilm** sells under the brand name Avigan, has been approved in Japan since 2014 to [treat influenza](https://cen.acs.org/articles/96/i11/influenza-antivirals-to-the-rescue.html) and other viral strains that don’t respond to other drugs. “Avigan tablets are expected to have efficacy against infection with the new coronavirus in view of its characteristic mechanism of action,” says a Fujifilm spokesperson

<https://cen.acs.org/pharmaceuticals/drug-development/Fujifilm-tests-favipiravir-COVID-19/98/i15>

The following are fom the drug development landscale Nature paper

<https://www.nature.com/articles/d41573-020-00073-5>





