

1. Quercetin and flavonoids: There is [interest](#) now in exploring flavonoids, including Quercetin, for the treatment of COVID-19. I could only find one [study](#) in pre-print (still not peer reviewed so still not indexed) in which Quercetin, as well as other plant compounds, are investigated as potential inhibitors of COVID-19 Main Protease with promising results. More research is needed.
2. A full list of potential therapeutics – in trials – is summarized by the [WHO](#)
3. Below is a list of the most promising
  - **Remdesivir**: A broad spectrum investigational nucleoside analogue, originally developed to treat a variety of viruses, including Ebola, SARS and MERS- causing coronaviruses. Remdesivir efficiently inhibited SARS-CoV-2 infection [in vitro](#). Favorable results have been reported in some cases, including the [first reported patient in the U.S.](#) A phase III clinical trial of remdesivir against SARS-CoV-2 was launched in Wuhan on February 4, 2020. However, as an experimental drug, remdesivir is not expected to be largely available for treating a very large number of patients in a timely manner.
  - **Chloroquine**: An old drug used as an antimalarial as well as for its immune modulation and anti-inflammatory properties. Has also been found to be active in mice against a variety of viruses, including certain enteroviruses, Zika virus, influenza A H5N1. Chloroquine efficiently inhibited SARS-CoV-2 infection [in vitro](#) and seems to be the drug of choice for large-scale use due to its availability, proven safety record, and a relatively low cost (more [here](#)). [Hydroxychloroquine](#), a less toxic derivative of chloroquine, [was found effective](#) in inhibiting SARS-CoV-2 infection in vitro. In a very small French [study](#) (also in pre-print), hydroxychloroquine treatment was significantly associated with viral load reduction/disappearance in COVID-19 patients and its effect is reinforced by **azithromycin**. [More](#) on Chloroquine
  - **Lopinavir/ritonavir**: Protease inhibitor combo used in HIV infection with possibly some benefit in the treatment of SARS. Recent [study](#) showed no significant efficacy in severe Covid-19 disease.
  - **Ciclesonide**: In a new [study](#) still in pre-print, ciclesonide, an inhaled corticosteroid, suppressed human coronavirus replication in cultured cells, but did not suppress replication of respiratory syncytial virus or influenza virus. The effective concentration of ciclesonide to block SARS-CoV-2 (the cause of COVID-19) replication (EC90) was 6.3  $\mu$ M.

The list below is taken from this [site](#)

- **Interferon-alpha**: An antiviral cytokine used against hepatitis B and C viruses. May be more effective for prophylaxis than post-exposure, based on experimental animal studies involving SARS.
- **Ribavirin**: Another nucleoside analogue approved for hepatitis C (in combination with other drugs) and respiratory syncytial virus (RSV) infections but also evaluated in SARS and MERS. Has been reported to be active in vitro against Covid-19.
- **Sofosbuvir**: Inhibits RNA-dependent RNA polymerase. Approved for treatment of hepatitis C, but also with in vitro activity against Covid-19.
- **Tocilizumab**: Anti-interleukin-6 monoclonal antibody used in rheumatoid and giant cell arthritis. Theoretically, may mitigate cytokine storm observed in some patients during the later stages of Covid-19 disease.

**Lara Zahabi-Bekdash, MD, PhD, MHSc**

Resident Physician, Public Health and Preventive Medicine