

One hundred fifty five drugs and 79 vaccines under development worldwide

April 20 2020



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A total of 155 drugs and 79 vaccines are currently being developed worldwide to combat COVID-19. The Austrian Institute for Health Technology Assessment (AIHTA) has compiled these astonishing figures as part of a new product line. The Vienna-based institute, which specialises in scientific decision support in the health care sector, worked closely with European colleagues to produce this overview. Most

of the 155 drugs under development against COVID-19 have already been approved for other (viral) infections and therefore require special evidence for approval against COVID-19. Of the 79 vaccine candidates, none has yet moved beyond the development stage.

It seems as if the test tubes of this world currently only exist for corona viruses—pharmaceutical and biotech companies, university institutes, research facilities and clinics worldwide are investing enormous resources into the research and development of drugs and vaccines to fight the pandemic. It is becoming increasingly difficult for [decision-makers](#) in politics and health care to maintain an overview—although cost-intensive decisions will be necessary at the latest when the first prophylaxes or therapies become available. For this reason, the Austrian Federal Ministry of Social Affairs, Health, Care and Consumer Protection (BMSGPK) and other stakeholders in the [health care system](#) asked the AIHTA to prepare an overview of worldwide research and development activities in the field of COVID-19, which can provide evidence-based support for future decisions.

New horizons

The request reached the AIHTA at the very moment it was introducing a new product line, the so-called "Policy Briefs", which are designed to provide rapid, yet evidence-based policy advice and provide a solid basis for acute decisions in health care. "We then set up a Horizon Scanning System (HSS) for the overview of COVID-19 R&D activities," explains Ms. Priv. Dr. phil. Claudia Wild, head of the AIHTA. "The aim of such an HSS is to provide early information on intervention options that are currently in the R&D stage. In the coming months, their development will be further monitored, data will be processed and purchasing by the health care system will be supported on an evidence-based foundation.

Using international sources, Dr. Wild and her team has identified a total

of 155 drugs that are being tested at this time for their effect against SARS-CoV-2/COVID-19. These are all based on one or more of the following known antiviral agent(s): Remdesivir, Lopinavir + Ritonavir (Kaletra), Favipirvir (Avigan), Darunavir (Prezista), Chloroquine phosphates (Resochin), Hydroxychloroquine (Plaquenil), Camostat Mesilate (Foipan), APN01 (rhACE2), Tocilizumab (Roactemra), Sarilumab (Kevzara) and Interferon beta 1a (SNG001). Commenting on these compounds, Dr. Wild points out: "Since the majority of these compounds are drugs that are already approved for other indications, international regulators emphasise the need for robust evidence for pivotal studies". In order to reinforce this claim, the European Medicines Agency (EMA) also founded its own COVID-19 Task Force on 9 April.

The 79 [vaccine](#) candidates identified by the AIHTA in the HSS are divided into three vaccine types: Live vaccines (with attenuated virus strains), dead vaccines (with virus proteins) or gene-based vaccines (with specific DNA or mRNA). Most of these projects are still in the development stage and have not yet been approved.

The AIHTA then created so-called vignettes for those drugs or vaccines that are particularly advanced in development or those that are considered particularly promising in the specialist literature. These are short, concise descriptions that provide additional information. In total, the AIHTA issued 11 vignettes on drugs and 8 on [vaccine candidates](#).

Overall, the AIHTA report is an extremely valuable aid to decision-making at a time when [health care](#) systems have to choose the most appropriate [drug](#) or vaccine against COVID-19 from a wide range of them. With its new product line "Policy Briefs", the AIHTA can thus offer the Institute's shareholders, the BMSGPK, the health funds of the nine Austrian federal states and the umbrella organisation of social insurances, adequate, evidence-based decision-making support in a health crisis of hitherto unknown extent.

More information: Covid-19: HSS/Horizon Scanning Living Document (v01 April 2020). eprints.aihta.at/1234/

Provided by Austrian Institute for Health Technology Assessment

Citation: One hundred fifty five drugs and 79 vaccines under development worldwide (2020, April 20) retrieved 26 April 2024 from <https://medicalxpress.com/news/2020-04-fifty-drugs-vaccines-worldwide.html>

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