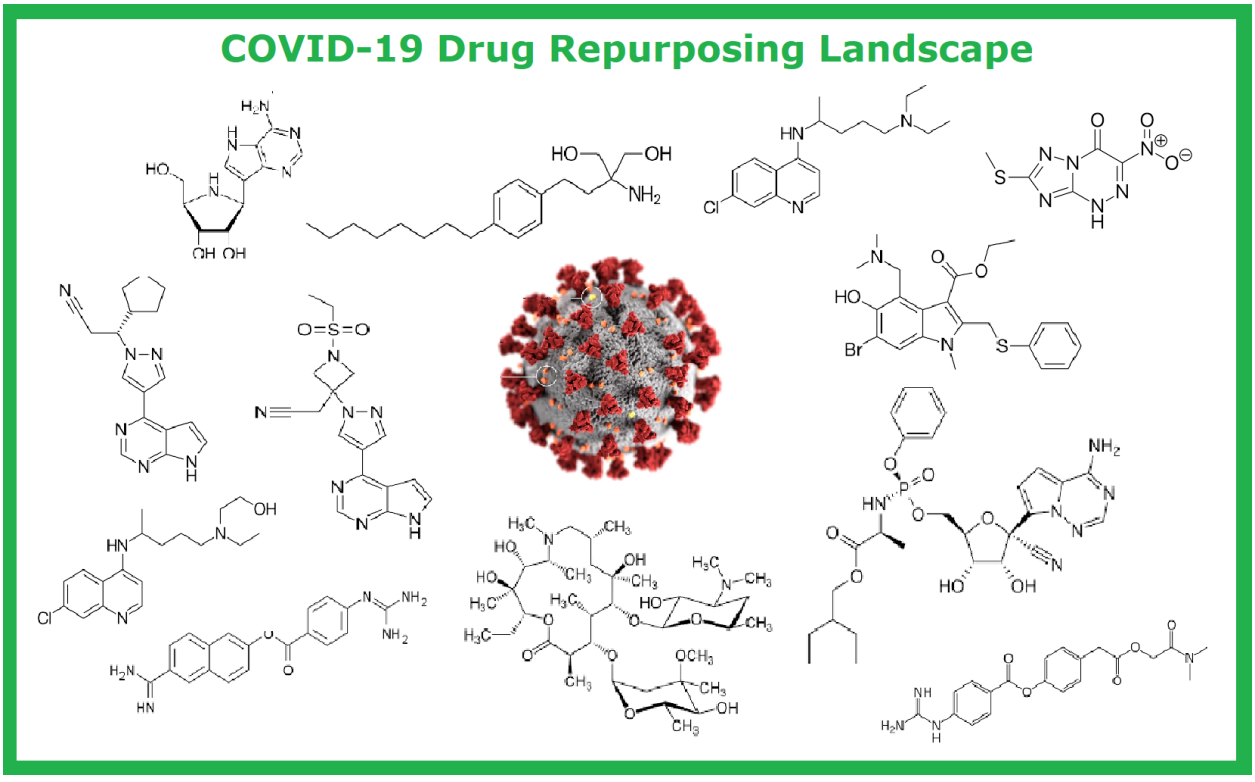
A Running List Of Covid-19 Treatments In Development

Oct. 6, 2021 by Andrii Buvailo

Disclaimer: This post is not medical advice, it is only for informational purposes. In case of need, consult your doctor at all times to make decisions about your health.

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which is a positive sense, single-stranded RNA beta coronavirus, a member of Beta-CoV lineage B (subgenus Sarbecovirus).



COVID-19 represents a global health threat and it is a serious driver of possible economic crisis, so curbing the current ongoing outbreak is the matter of top priority for most health organizations and biotech companies.

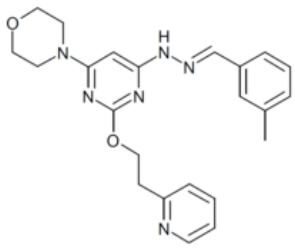
In order to follow the quick pace of progress in the area of coronavirus treatments, we decided to create and maintain a list of key programs and projects, with data about companies and specific clinical trials

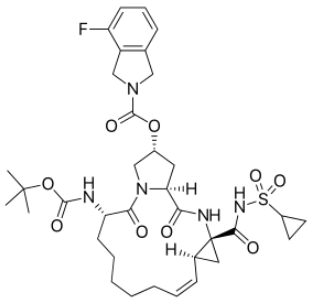
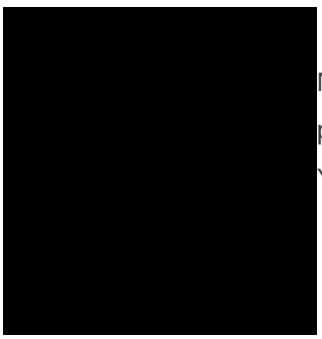
where available. Suggest missing programs and molecules in the comments below.

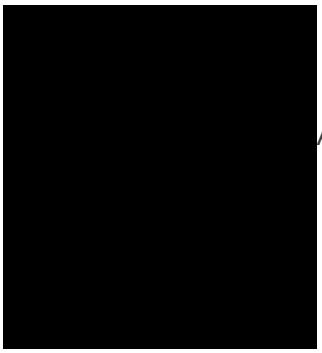
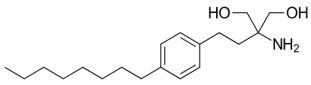
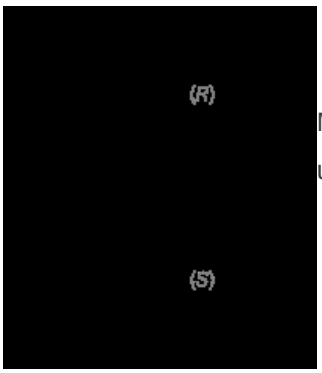
The majority of molecules in the below list represent the case of **drug repurposing** when a molecule has prior known activity against some other indication. Drug repurposing is the most efficient option to come up with a new cure quickly -- a lot of safety data and other study results are already available for the molecule which allows to substantially accelerate the drug development process.

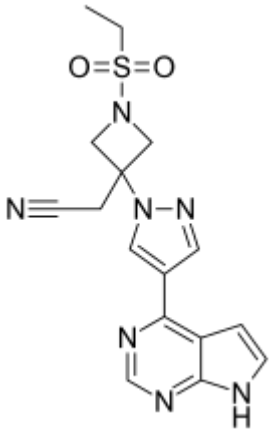
Most of the potential treatments against the coronavirus Covid-19 fall within two categories: treatments for the respiratory symptoms, and inhibitors of viral growth.

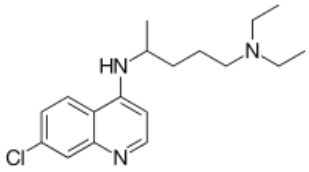
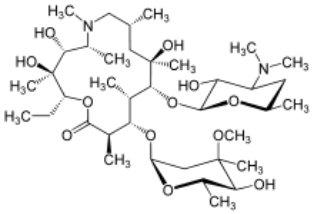
Table1. A Running List Of Covid-19 Treatments In Development (Antivirals)

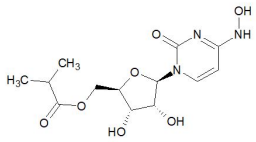
Candidate	MoA / indication	Status/clinical trials	Sponsor/Producer
Kaletra (lopinavir/ritonavir)	HIV protease inhibitor	> 10 latest stages clinical studies (Including combinations with other drugs)	AbbVie
Combinational therapy	HIV-1 infection	NCT04321174 NCT04255017 NCT04307693	
COVID-19 antibody therapy	antibody	Development stage	AbCellera Eli Lilly
LAM-002A (Apilimod) 	Block cellular entry and trafficking of the SARS-CoV-2 virus Autoimmune diseases and follicular lymphoma	Phase II clinical trials NCT04446377	AI Therapeutics, Yale University
AN01 (rhsACE2) Recombinant human angiotensin-converting enzyme 2	Blocks the spike protein, can protect the lung, blood vessels or the heart from injury via its enzyme function.	Phase II clinical trials NCT04335136	Apeiron Biologics

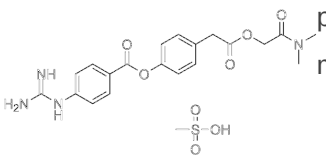
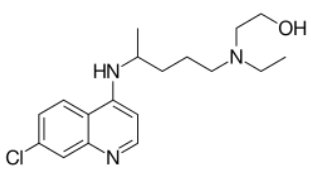
TMC-310911 (ASC-09)	Novel investigational protease inhibitor (structurally similar to darunavir)	Clinical Studies of Combinational Therapies NCT04261907 NCT04261270	Ascletis, First Affiliated Hospital of Zhejiang University, Tongji Hospital
Ganovo (Danoprevir)			
	Hepatitis C virus protease inhibitor Hepatitis C	Phase 4 Clinical Study In combination with other drugs NCT04291729	Ascletis, The Ninth Hospital of Nanchang
BGE-175	a potent oral inhibitor ofthe prostaglandin D2 (PGD2) DP1 pathway	Phase 2 NCT04705597	BioAge Labs, Inc.
HFB30132A	Monoclonal Antibody Directed Against SARS-CoV-2,	Phase 1 NCT04590430	HiFiBiO Therapeutics
Itolizumab (Alzumab) Humanized IgG1 monoclonal antibody	Inhibits CD6 to shut down the activation and trafficking of pathogenic T cells that drive auto-immune response. Indication: Chronic plaque psoriasis	Completed Phase II clinical trials in India. NCT04475588	Equillium, Biocon
Galidesivir (BCX4430)			
	Nucleoside RNA polymerase inhibitor Yellow Fever	Advanced development stage	BioCryst Pharmaceuticals

Bemcentinib 	AXL kinase inhibitor. Indication: therapy resistant cancers.	Phase II Clinical Trials 2020-001736-95	BerGenBio University Hospital Southampton NHS Foundation Trust, UK
BOLD-100	Inhibit stress-induced upregulation of GRP78 Cancer drug	Suggested	Bold Therapeutics
Leronlimab (PRO 140) Humanized monoclonal antibody	Binds to CCR5 HIV, cancer	Initiation of Phase 2 Clinical Study	CytoDyn Inc.
Ivermectin 	Anti-parasitic drug	Preclinical study	Doherty Institute Monash University in Australia
Fingolimod 	Sphingosine 1-phosphate receptor modulator Multiple sclerosis	Phase 2 Clinical Study in China NCT04280588	First Affiliated Hospital of Fujian Medical University
Thalidomide 	MoA is not fully understood	Phase 2 Clinical Trials in China NCT04273581 NCT04273529	First Affiliated Hospital of Wenzhou Medical University

Remdesivir (GS - 5734)		Orphan Drug Designation for Gilead	
	Block RNA polymerase Ebola	9 clinical studies worldwide NCT04323761 NCT04257656 NCT04315948	Gilead Sciences
Truvada (emtricitabine + tenofovir) Combinational therapy **Triazavirin**	Non-nucleoside reverse transcriptase inhibitors HIV infection	In preparation	Gilead Sciences
	inhibits RNA synthesis	Phase 3 Clinical Study in China ChiCTR2000030001	Health commission of Heilongjiang province
Baricitinib 	JAK/NAK inhibitor Rheumatic Disease COVID-19	Phase 3 Clinical Study in Italy NCT04320277	Hospital of Prato
COV-BARRIER **(LY3009104) baricitinib**		Phase 3 Clinical Study NCT04421027	Eli Lilly and BenevolentAI

		Phase 3 Clinical Studies NCT04304053 in Spain	Janssen Pharmaceuticals Fundacio Lluita Contra la SIDA, Medical Institutions in China
Prezista/ Prezcobix (darunavir + cobicistat) Combinational therapy	Protease inhibitor HIV infection	3Cclinical tStudies in China NCT04252274 ChiCTR2000030259 ChiCTR2000029541	
Chloroquine 	Endosomal acidification fusion inhibitor Anti-malarial	> 10 studies worldwide > 10 Clinical Studies in China ChiCTR2000029609 NCT04261517	Medical institutions worldwide
Azithromycin 	Antibiotic	> 10 trials in combination with other drugs NCT04322396 NCT04321278 NCT04322123	Medical institutions worldwide
Remestemcel-L Mesenchymal stromal cell (MSC)	Migrate to the site of inflammation to reduce the production of pro-inflammatory cytokines. Indication: Acute Graft versus Host Disease	Phase III Clinical Trials NCT04371393	Mesoblast, Inc. / Icahn School of Medicine at Mount Sinai
Aviptadil (RLF-100) Vasoactive Intestinal Polypeptide VIP	Block replication of the SARS-CoV-2 virus in human lung cells and monocytes	Phase 2/3 Clinical Trials NCT04311697 NCT04360096 NCT04536350	NeuroRx, Relief Therapeutics

Favipiravir (T-705)		Approved in China	
	Block RNA polymerase Flu drug	Clinical studies in China, Japan, and Italy ChiCTR2000029996 ChiCTR2000030894	Produced by Fujifilm Toyama Chemical
Kevzara (sarilumab) Monoclonal antibody	Anti - IL-6 Rheumatoid arthritis	Phase 2, 3 Clinical Study NCT04315298	Regeneron Pharmaceuticals, Sanofi
EIDD-2801			Ridgeback Biotherapeutics
	Block RNA polymerase	Suggested	Developed by Emory University
Activase	Tissue plasminogen activator Stroke drug	Suggested Approved in China	Roche (Genentech)
Actemra (tocilizumab) Monoclonal antibody	anti-IL-6R Rheumatoid arthritis	5 Clinical Studies in Denmark, Italy, China NCT04317092 NCT04331795	Roche, Medical institutions worldwide
Umifenovir (Arbidol)	Membrane fusion inhibitor	Latest stages clinical studies in China (Including combinations with other drugs) ChiCTR2000029621 NCT04260594	Ruijin Hospital, Other institutions in China

318H Monoclonal antibody	Selectively targets cells having an abnormally high level of glycolysis and oxidative stress	Preclinical Development	SIWA Therapeutics
TAK-888 (Plasma-derived antibodies)	Aggressive cancers. Polyclonal hyperimmune globulin (H-IG)	Development stage	Takeda
Ruxolitinib (Jakafi, Jakavi)	Inhibitor of Janus-associated kinases (JAK1 and JAK2) Myelofibrosis	Clinical Study in China Ruxolitinib combined with stem cell therapy ChiCTR2000029580 Tongji Hospital, Hubei, China	Tongji Hospital, Hubei, China Manufacturer - Incyte Corporation
Camostat mesylate (Foypan) 	inhibit SARS-CoV-2 Spike protein-initiated membrane fusion	Phase 1, 2 Clinical Study in Germany NCT04321096	University of Aarhus Manufactured in Japan
Nafamostat mesylate (Fusan)	inhibit SARS-CoV-2 Spike protein-initiated membrane fusion Acute pancreatitis	Completed preclinical study in Japan	University of Tokyo
Hydroxychloroquine (Plaquenil) 	Endosomal acidification fusion inhibitor Anti-malarial Rheumatoid arthritis treatment	> 10 Clinical Studies worldwide 10 Clinical Studies in China NCT04321278 NCT04261517 ChiCTR2000029868	

VIR-7831, VIR-7832 (sotrovimab)	Immunoglobulin Intravenous (Human) Monoclonal Antibody Directed Against SARS-CoV-2	phase II/III NCT04779879 NCT04913675	Vir Biotechnology in collaboration with GSK
COVID-HIGIV	Monoclonal Antibody Directed Against SARS-CoV-2,	Phase I NCT04661839	Emergent BioSolutions
MK-4482, EIDD-2801 (molnupuravir)	Oral antiviral medicine	Phase III NCT04575597	Merck Sharp & Dohme Corp.

- BioAge Labs
- HiFiBiO Therapeutics