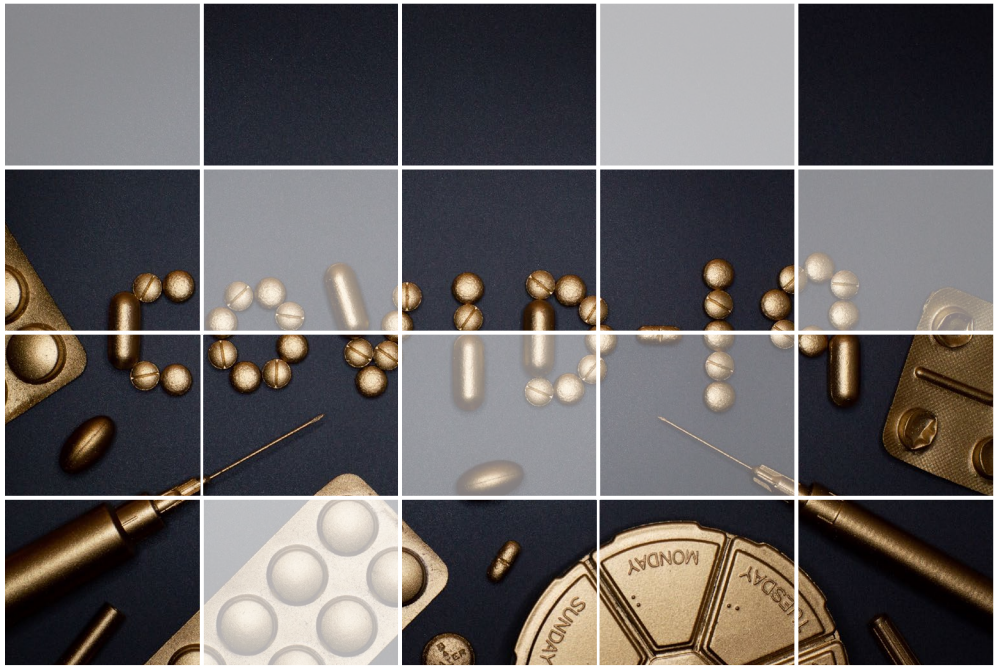
COVID-19 Therapies

Overview



2021.05
Dragon Gate Investment Partners LLC
Stella Dai

Executive Summary

It is anticipated that **antiviral therapies** would have the greatest effect early in the course of the disease, while **immunosuppressive/anti-inflammatory** therapies are likely to be more beneficial in the later stages of COVID-19.

No therapy has been proven to be beneficial in outpatients with mild to moderate COVID-19 who are not at high risk for disease progression.

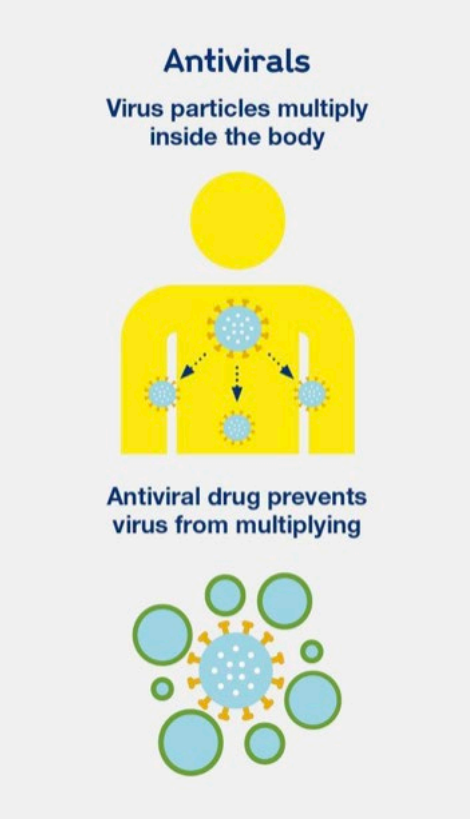
Remdesivir is the only Food and Drug Administration-approved drug for the treatment of COVID-19.

Source: National Institutes of Health. "Therapeutic Management of Adults With COVID-19", https://www.covid19treatmentguidelines.nih.gov/therapeutic-management/ , Accessed May 10, 2021

Antiviral Drugs

Antiviral Therapy

Because severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) replication leads to many of the clinical manifestations of COVID-19, antiviral therapies are being investigated for the treatment of COVID-19. These drugs inhibit viral entry (via the angiotensin-converting enzyme 2 [ACE2] receptor and transmembrane serine protease 2 [TMPRSS2]), viral membrane fusion and endocytosis, or the activity of the SARS-CoV-2 3-chymotrypsin-like protease (3CLpro) and the RNA-dependent RNA polymerase. Because viral replication may be particularly active early in the course of COVID-19, antiviral therapy may have the greatest impact before the illness progresses to the hyperinflammatory state that can characterize the later stages of disease, including critical illness. For this reason, it is necessary to understand the role of antiviral medications in treating mild, moderate, severe, and critical illness in order to optimize treatment for people with COVID-19.



Sources: National Institutes of Health. "Antiviral Drugs That Are Approved or Under Evaluation for the Treatment of COVID-19", https://www.covid19treatmentguidelines.nih.gov/antiviral-therapy/ , Accessed May 10, 2021; Wellcome. "What drugs are working as treatments for Covid-19?", https://wellcome.org/news/what-drugs-are-working-treatments-covid-19, Accessed May 17, 2021

Remdesivir

Remdesivir (e.g., for patients who require minimal supplemental oxygen) **(BIIa)**

Remdesivir, an antiviral agent, is currently **the only drug** that is **approved by the FDA** for the treatment of COVID-19. It is recommended for use in hospitalized patients who require supplemental oxygen. However, it is not routinely recommended for patients who require mechanical ventilation due to the lack of data showing benefit at this advanced stage of the disease.

Copyright: digicomphoto / iStock

Source: National Institutes of Health. "Therapeutic Management of Adults With COVID-19", https://www.covid19treatmentguidelines.nih.gov/therapeutic-management/ , Accessed May 10, 2021
Rating of Recommendations: B = Moderate Rating of Evidence: IIa = Other randomized trials or subgroup analyses of randomized trials

Chloroquine or Hydroxychloroquine With or Without Azithromycin

Chloroquine is an antimalarial drug that was developed in 1934. Hydroxychloroquine, an analogue of chloroquine, was developed in 1946. Hydroxychloroquine is used to treat autoimmune diseases, such as systemic lupus erythematosus (SLE) and rheumatoid arthritis, in addition to malaria.

- The Panel **recommends against** the use of **chloroquine** or **hydroxychloroquine** with or without **azithromycin** for the treatment of COVID-19 in hospitalized patients **(AI)**.
- In nonhospitalized patients, the Panel **recommends against** the use of **chloroquine** or **hydroxychloroquine** with or without **azithromycin** for the treatment of COVID-19, except in a clinical trial **(AIIa)**.
- The Panel **recommends against** the use of **high-dose chloroquine** (600 mg twice daily for 10 days) for the treatment of COVID-19 **(AI)**.

Source: National Institutes of Health. "Chloroquine or Hydroxychloroquine With or Without Azithromycin", https://www.covid19treatmentguidelines.nih.gov/antiviral-therapy/chloroquine-or-hydroxychloroquine-with-or-without-azithromycin/ , Accessed May 10, 2021
Rating of Recommendations: A = Strong Rating of Evidence: I = One or more randomized trials without major limitations; IIa = Other randomized trials or subgroup analyses of randomized trials

Lopinavir/Ritonavir and Other HIV Protease Inhibitors

The replication of SARS-CoV-2 depends on the cleavage of polyproteins into an RNA-dependent RNA polymerase and a helicase. Two proteases are responsible for this cleavage: 3-chymotrypsin-like protease (3CLpro) and papain-like protease (PLpro).

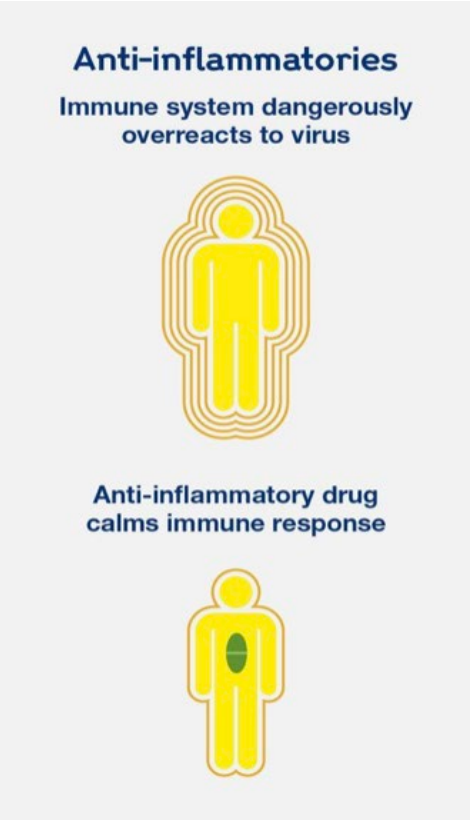
- The Panel **recommends against** the use of **lopinavir/ritonavir** and **other HIV protease inhibitors** for the treatment of COVID-19 in hospitalized patients **(AI)**.
- The Panel **recommends against** the use of **lopinavir/ritonavir** and **other HIV protease inhibitors** for the treatment of COVID-19 in nonhospitalized patients **(AIII)**.

Source: National Institutes of Health. "Antiviral Drugs That Are Approved or Under Evaluation for the Treatment of COVID-19", https://www.covid19treatmentguidelines.nih.gov/antiviral-therapy/ , Accessed May 10, 2021
Rating of Recommendations: A = Strong Rating of Evidence: I = One or more randomized trials without major limitations; III = Expert opinion

Anti-inflammatory Drugs

Anti-inflammatory Drugs

Anti-inflammatory drugs work by calming the immune system. In people with severe Covid-19, the body's violent reaction in trying to fight off the virus can cause serious harm and even death. Anti-inflammatories can reduce this response. Researchers have found both positive and negative results.



Source: Wellcome. "What drugs are working as treatments for Covid-19?", https://wellcome.org/news/what-drugs-are-working-treatments-covid-19, Accessed May 17, 2021

Dexamethasone

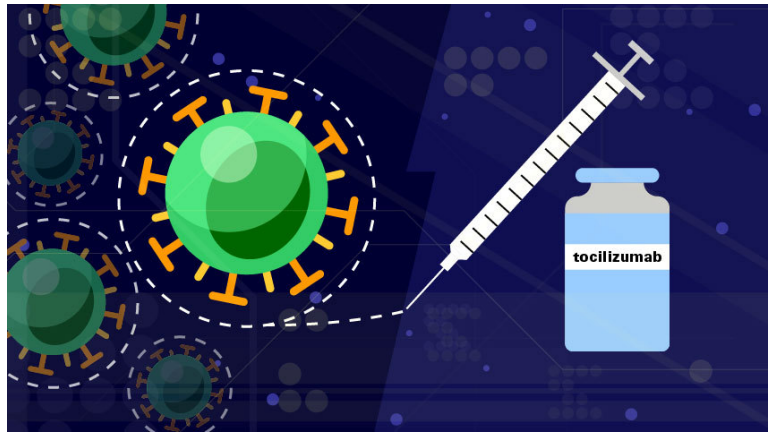
Dexamethasone plus remdesivir (e.g., for patients who require increasing amounts of oxygen) **(BIII)**;
Dexamethasone (e.g., when combination therapy with remdesivir cannot be used or is not available) **(BI)**.

Source: National Institutes of Health. "Therapeutic Management of Adults With COVID-19", https://www.covid19treatmentguidelines.nih.gov/therapeutic-management/ , Accessed May 10, 2021
Rating of Recommendations: B = Moderate Rating of Evidence: I = One or more randomized trials without major limitations; III = Expert opinion

Dexamethasone

Dexamethasone, a corticosteroid, has been found to improve survival in hospitalized patients who require supplemental oxygen, with the greatest benefit observed in patients who require mechanical ventilation. Therefore, the use of dexamethasone is strongly recommended in this setting.

Adding tocilizumab, a recombinant humanized anti-interleukin-6 receptor monoclonal antibody, to dexamethasone therapy was found to improve survival among patients who were exhibiting rapid respiratory decompensation due to COVID-19.



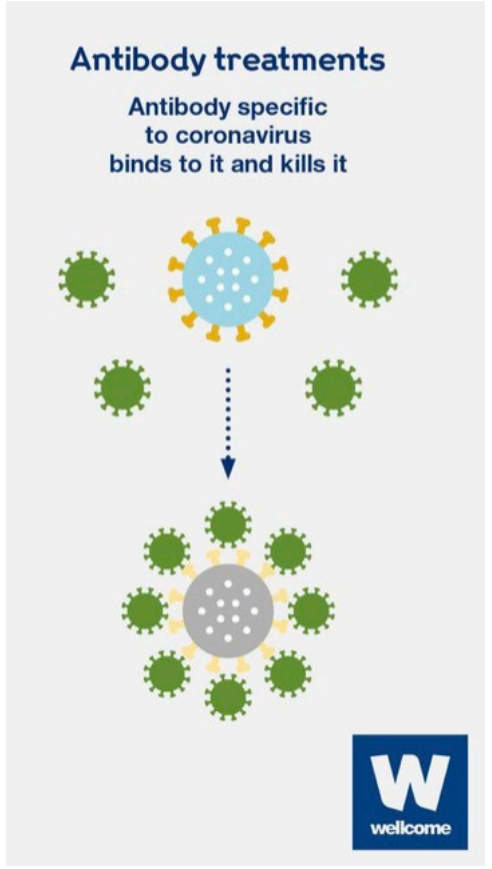
Source: National Institutes of Health. "Therapeutic Management of Adults With COVID-19", https://www.covid19treatmentguidelines.nih.gov/therapeutic-management/ , Accessed May 10, 2021

Anti-SARS-CoV-2 Antibody Products

Anti-SARS-CoV-2 Monoclonal Antibodies

The SARS-CoV-2 genome encodes four major structural proteins: spike (S), envelope (E), membrane (M), and nucleocapsid (N), as well as nonstructural and accessory proteins. The S protein is further divided into two subunits, S1 and S2, that mediate host cell attachment and invasion. Through its receptor-binding domain (RBD), S1 attaches to angiotensin-converting enzyme 2 (ACE2) on the host cell; this initiates a conformational change in S2 resulting in virus-host cell membrane fusion and viral entry.

Many individuals with COVID-19 produce neutralizing antibodies to SARS-CoV-2 about 10 days after disease onset, with higher antibody levels observed in those with severe disease. The neutralizing activity of COVID-19 patients' plasma was correlated with the magnitude of antibody responses to SARS-CoV-2 S and N proteins. Monoclonal antibodies targeting the S protein have the potential to prevent SARS-CoV-2 infection and to alleviate symptoms and limit progression to severe disease in patients with mild to moderate COVID-19, particularly in those who have not yet developed an endogenous antibody response.



Sources: National Institutes of Health. "Anti-SARS-CoV-2 Monoclonal Antibodies", https://www.covid19treatmentguidelines.nih.gov/anti-sars-cov-2-antibody-products/anti-sars-cov-2-monoclonal-antibodies/ , Accessed May 10, 2021; Wellcome. "What drugs are working as treatments for Covid-19?", https://wellcome.org/news/what-drugs-are-working-treatments-covid-19, Accessed May 17, 2021

Anti-SARS-CoV-2 Monoclonal Antibodies

- The COVID-19 Treatment Guidelines Panel (the Panel) recommends using one of the following anti-SARS-CoV-2 monoclonal antibody combinations (listed in alphabetical order) to treat outpatients with mild to moderate COVID-19 who are at high risk of clinical progression, as defined by the Emergency Use Authorization (EUA) criteria for the products:
    - **Bamlanivimab 700 mg plus etesevimab 1,400 mg (AIIa)**;
    - **Casirivimab 1,200 mg plus imdevimab 1,200 mg (AIIa)**.

Source: National Institutes of Health. "Anti-SARS-CoV-2 Antibody Products", https://www.covid19treatmentguidelines.nih.gov/anti-sars-cov-2-antibody-products/, Accessed May 10, 2021
Rating of Recommendations: A = Strong Rating of Evidence: IIa = Other randomized trials or subgroup analyses of randomized trials

Bamlanivimab plus Etesevimab

Bamlanivimab (also known as LY-CoV555 and LY3819253) is a neutralizing monoclonal antibody that targets the RBD of the S protein of SARS-CoV-2. Etesevimab (also known as LY-CoV016 and LY3832479) is another neutralizing monoclonal antibody that binds to a different but overlapping epitope in the RBD of the SARS-CoV-2 S protein.

Because of an increasing number of reports of SARS-CoV-2 variants that are resistant to bamlanivimab alone, FDA has recently revoked the EUA for bamlanivimab, and the product will no longer be distributed in the United States.

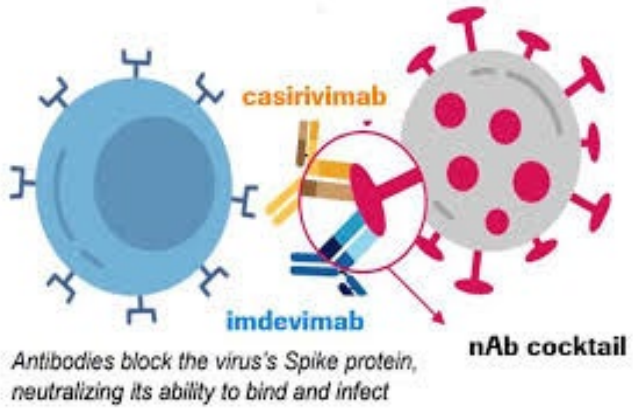
Copyright: Brian Wells/ Times Herald

Source: National Institutes of Health. "Anti-SARS-CoV-2 Monoclonal Antibodies", https://www.covid19treatmentguidelines.nih.gov/anti-sars-cov-2-antibody-products/anti-sars-cov-2-monoclonal-antibodies/ , Accessed May 10, 2021

Casirivimab plus Imdevimab

Casirivimab (previously REGN10933) and imdevimab (previously REGN10987) are recombinant human monoclonal antibodies that bind to nonoverlapping epitopes of the S protein RBD of SARS-CoV-2.

Two combination products, bamlanivimab plus etesevimab and casirivimab plus imdevimab, are available through Food and Drug Administration (FDA) Emergency Use Authorizations (EUAs) for the treatment of mild to moderate COVID-19 in nonhospitalized patients with laboratory confirmed SARS-CoV-2 infection who are at high risk for progressing to severe disease and/or hospitalization.

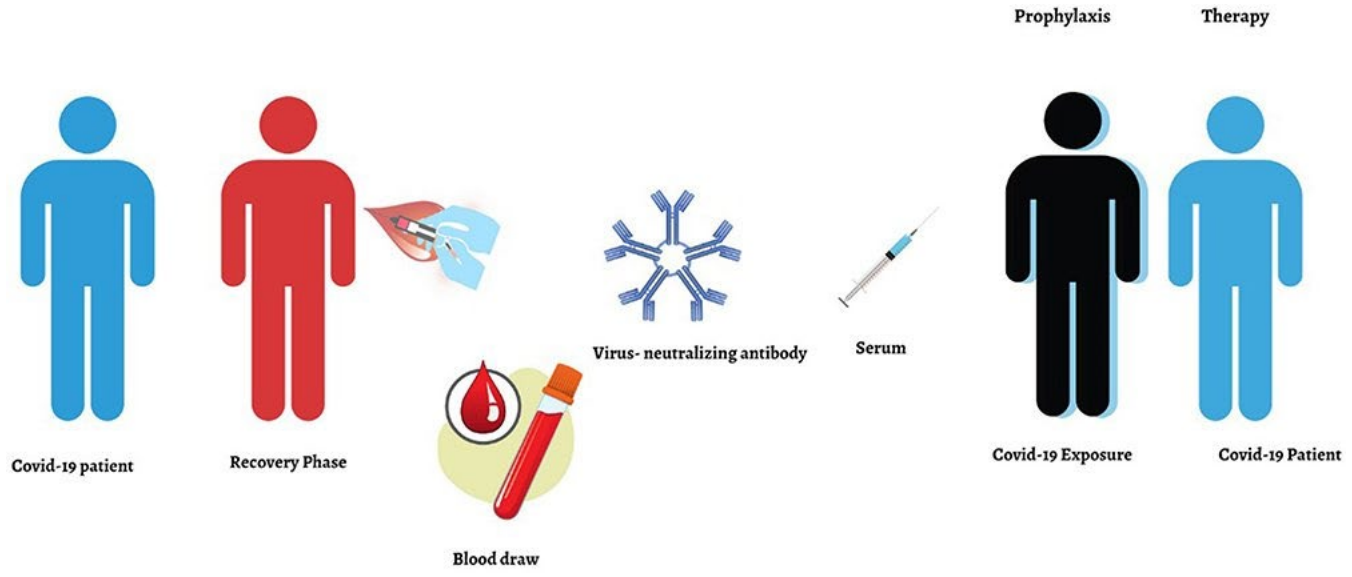


Sources: National Institutes of Health. "Anti-SARS-CoV-2 Monoclonal Antibodies", https://www.covid19treatmentguidelines.nih.gov/anti-sars-cov-2-antibody-products/anti-sars-cov-2-monoclonal-antibodies/ , Accessed May 10, 2021; Roche. "Roche's 2020 Full-Year Results ", https://www.roche.com/dam/jcr:051917ef-fb15-475a-a7e6-0112b96d9740/en/bmk21slides-e.pdf, , Accessed May 17, 2021

Convalescent Plasma

Convalescent Plasma

Plasma from donors who have recovered from COVID-19 may contain antibodies to SARS-CoV-2 that may help suppress the virus and modify the inflammatory response. The Food and Drug Administration (FDA) issued an Emergency Use Authorization (EUA) for convalescent plasma for the treatment of certain hospitalized patients with COVID-19.



Sources: National Institutes of Health. "Convalescent Plasma", https://www.covid19treatmentguidelines.nih.gov/anti-sars-cov-2-antibody-products/convalescent-plasma/ , Accessed May 10, 2021; Dovepress. "Convalescent Plasma Therapy for Management of COVID-19: Perspectives and Deployment in the Current Global Pandemic", https://www.dovepress.com/convalescent-plasma-therapy-for-management-of-covid-19-perspectives-an-peer-reviewed-fulltext-article-RMHP, Accessed May 17, 2021

Convalescent Plasma

- For hospitalized patients with COVID-19 who do not have impaired immunity:
  - The Panel **recommends against** the use of COVID-19 **convalescent plasma** for the treatment of COVID-19 in mechanically ventilated patients **(AI)**.
  - The Panel **recommends against** the use of high-titer COVID-19 **convalescent plasma** for the treatment of COVID-19 in hospitalized patients who do not require mechanical ventilation, except in a clinical trial **(AI)**.

Source: National Institutes of Health. "Convalescent Plasma", https://www.covid19treatmentguidelines.nih.gov/anti-sars-cov-2-antibody-products/convalescent-plasma/ , Accessed May 10, 2021
Rating of Recommendations: A = Strong Rating of Evidence: I = One or more randomized trials without major limitations

What to Expect

Pfizer Inc. (NYSE: PFE)

The **oral antiviral clinical candidate PF-07321332**, a SARS-CoV2-3CL protease inhibitor, has demonstrated potent in vitro anti-viral activity against SARS-CoV-2, as well as activity against other coronaviruses, suggesting potential for use in the treatment of COVID-19 as well as potential use to address future coronavirus threats.

Protease inhibitors bind to a viral enzyme (called a protease), preventing the virus from replicating in the cell. Protease inhibitors have been effective at treating other viral pathogens such as HIV and hepatitis C virus, both alone and in combination with other antivirals. Currently marketed therapeutics that target viral proteases are not generally associated with toxicity and as such, this class of molecules may potentially provide well-tolerated treatments against COVID-19.

Pfizer is also investigating an intravenously administered investigational protease inhibitor, PF-07304814, which is currently in a Phase 1b multi-dose trial in hospitalized clinical trial participants with COVID-19.

Source: Pfizer Inc. "Pfizer initiates phase 1 study of novel oral antiviral therapeutic agent against Sars-Cov-2", https://www.pfizer.com/news/press-release/press-release-detail/pfizer-initiates-phase-1-study-novel-oral-antiviral, Accessed May 5, 2021

Merck & Co., Inc. (NYSE: MRK)

MOVe-OUT is an ongoing Phase 2/3, randomized, placebo-controlled, double-blind, multi-site study evaluating the efficacy, safety and pharmacokinetics of **orally administered molnupiravir** in non-hospitalized participants with COVID-19 confirmed using polymerase chain reaction.

The percentage of patients who were hospitalized and/or died in Part 1 of the MOVe-OUT study was lower in the combined molnupiravir-treated groups versus the placebo arm; the number of events reported are not sufficient to provide a meaningful measure of clinical effect. Analysis of SARS-CoV-2 in nasopharyngeal and oropharyngeal swabs from patients in both MOVe-OUT and MOVe-IN using quantitative and qualitative polymerase chain reaction, an exploratory endpoint, indicated that molnupiravir inhibits replication of the virus, as demonstrated by a greater decrease from baseline in viral RNA compared to placebo at Day 5 and Day 10, and by a larger proportion of participants with undetectable viral RNA at Day 10 and Day 15 following the end of treatment.

Merck plans to start enrolling patients in Phase 3 portion (Part 2) of MOVe-OUT by late April/early May.

Source: Merck & Co., Inc. "Merck and Ridgeback Biotherapeutics Provide Update on Progress of Clinical Development Program for Molnupiravir, an Investigational Oral Therapeutic for the Treatment of Mild-to-Moderate COVID-19", https://www.merck.com/news/merck-and-ridgeback-biotherapeutics-provide-update-on-progress-of-clinical-development-program-for-molnupiravir-an-investigational-oral-therapeutic-for-the-treatment-of-mild-to-moderate-covid-19/ , Accessed May 12, 2021

AstraZeneca PLC (NasdaqGS: AZN)

TACKLE COVID-19 is an AstraZeneca-sponsored Phase III trial evaluating the safety and efficacy of **AZD7442** compared to placebo in treating non-hospitalised patients with mild to moderate COVID-19. AZD7442 is also being studied as a **potential treatment** as part of the National Institute of Health's Phase II/III ACTIV-2 (outpatient) and ACTIV-3 (hospitalised) trials. All five trials are assessing intramuscular (IM) administration, with ACTIV-2 evaluating both IM and intravenous administration routes.

AZD7442 is a combination of two LAABs derived from convalescent patients after SARS-CoV-2 infection. Discovered by Vanderbilt University Medical Center and licensed to AstraZeneca in June 2020, the human monoclonal antibodies were optimised by AstraZeneca with half-life extension and reduced Fc receptor binding. The half-life extension should afford six to 12 months of protection from COVID-19 following a single administration. The reduced Fc receptor binding aims to minimise the risk of antibody-dependent enhancement of disease - a phenomenon in which virus-specific antibodies promote, rather than inhibit, infection and/or disease.

Source: AstraZeneca PLC. "AstraZeneca to supply the US with up to half a million additional doses of the potential COVID-19 antibody treatment AZD7442", https://www.astrazeneca.com/media-centre/press-releases/2021/us-supply-agreement-for-additional-azd7442-doses.html, Accessed May 12, 2021

Beroni Group (OTCQX: BNIGF)

Beroni Group has successfully constructed and purified 24 **single-domain antibodies** for the rapid detection and treatment of **COVID-19**.

We identifying 24 specific single-domain antibodies with high affinity to the SARS-CoV-2 N-protein and S-protein antigens through high-throughput screening in May 2020. Our R&D team has employed structural biology, computational biology and biophysical methods to further analyze and optimize the properties of these single-domain antibodies.

Through rational design and transformation, the affinity and specificity of these single-domain antibodies have been greatly enhanced. Of the 24 single-domain antibodies identified, 16 interact with the S-protein which may have applications for anti-viral therapeutics and 8 interacts with the N-protein, with potential as markers for diagnostic assays.

Source: Beroni Group.

Related Companies

Gilead Sciences, Inc. (NasdaqGS: GILD)

Gilead Sciences, Inc. is a biopharmaceutical company that has pursued and achieved breakthroughs in medicine for more than three decades, with the goal of creating a healthier world for all people. The company is committed to advancing innovative medicines to prevent and treat life-threatening diseases, including HIV, viral hepatitis and cancer. Gilead operates in more than 35 countries worldwide, with headquarters in Foster City, California.

Gilead Sciences, Inc. (NasdaqGS: GILD)

GILEAD

67.45 +0.23 (+0.34%)
At close: May 12 4:00PM EDT

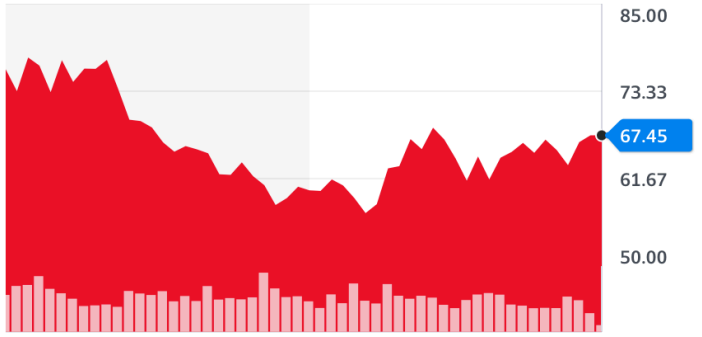
Summary | Company Outlook | Chart | Conversations | Statistics | Historical Data | Profile | Financials | Analysis | Options

Previous Close	67.22	Market Cap	84.594B
Open	66.75	Beta (5Y Monthly)	0.40
Bid	67.19 x 1400	PE Ratio (TTM)	281.04
Ask	67.50 x 900	EPS (TTM)	0.24
Day's Range	66.71 - 67.95	Earnings Date	Jul 28, 2021 - Aug 02, 2021
52 Week Range	56.56 - 79.31	Forward Dividend & Yield	2.84 (4.22%)
Volume	8,286,285	Ex-Dividend Date	Jun 14, 2021
Avg. Volume	7,788,070	1y Target Est	74.54

Fair Value
XX.XX — Near Fair Value
5% Est. Return
View details

Related Research
Analyst Report: Gilead Sciences,...
Analyst Report: Gilead Sciences,...
View more

1D 5D 1M 6M YTD 1Y 5Y Max | Full screen



Trade prices are not sourced from all markets

Chart Events
Bullish *pattern detected*
Short-term KST
View all chart patterns

Performance Outlook

Short Term	Mid Term	Long Term
2W - 6W	6W - 9M	9M+

Source: Yahoo Finance. Accessed May 12, 2021

Cadila Healthcare Ltd (BSE: CADILAHC.BO)

Zydus Cadila, a leading Indian Pharmaceutical company is a fully integrated, global healthcare provider. With in-depth domain expertise in the field of healthcare, it has strong capabilities across the spectrum of the pharmaceutical value chain. From formulations to active pharmaceutical ingredients and animal healthcare products to wellness products, Zydus has earned a reputation amongst Indian pharmaceutical companies for providing comprehensive and complete healthcare solutions.

Cadila Healthcare Ltd (BSE: CADILAHC.BO)

646.95 +17.25 (+2.74%)
At close: May 12 3:55PM IST

Summary | Chart | Statistics | Historical Data | Profile | Financials | Analysis | Options | Holders | Sustainability

Previous Close	629.70	Market Cap	662.309B
Open	634.95	Beta (5Y Monthly)	N/A
Bid	646.95 x 0	PE Ratio (TTM)	49.94
Ask	649.45 x 0	EPS (TTM)	N/A
Day's Range	632.80 - 673.70	Earnings Date	N/A
52 Week Range	212.70 - 673.70	Forward Dividend & Yield	N/A (N/A)
Volume	1,388,560	Ex-Dividend Date	N/A
Avg. Volume	196,297	1y Target Est	444.39

Fair Value
XX.XX N/A
View details

Related Research
View more

1D 5D 1M 6M YTD 1Y 5Y Max Full screen

Chart Events
Neutral *pattern detected*
View all chart patterns

Performance Outlook

Short Term	Mid Term	Long Term
2W - 6W	6W - 9M	9M+

Source: Yahoo Finance. Currency in INR. Accessed May 12, 2021

Bayer Aktiengesellschaft (OTCMKTS: BAYZF)

Bayer is a Life Science company with a more than 150-year history and core competencies in the areas of health care and agriculture. With our innovative products, we are contributing to finding solutions to some of the major challenges of our time.

The Bayer Group is managed as a life science company with three divisions – Pharmaceuticals, Consumer Health and Crop Science, which are also our reporting segments. The Enabling Functions support the operational business. In 2020, the Bayer Group comprised 385 consolidated companies in 83 countries.

Bayer Aktiengesellschaft (OTCMKTS: BAYZF)

68.27 +3.49 (+5.39%)
At close: May 12 3:44PM EDT

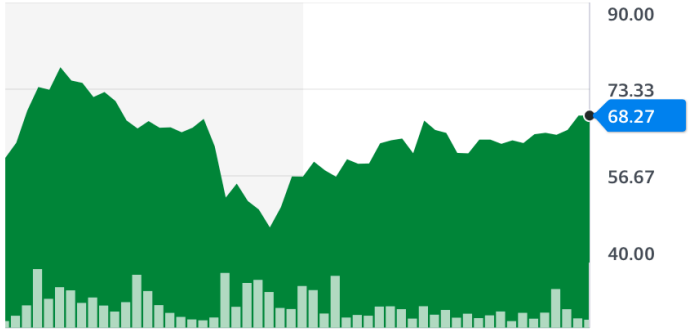
Summary | Company Outlook | Chart | Conversations | Statistics | Historical Data | Profile | Financials | Analysis | Options

Previous Close	64.78	Market Cap	67.161B
Open	67.09	Beta (5Y Monthly)	1.31
Bid	0.00 x 0	PE Ratio (TTM)	N/A
Ask	0.00 x 0	EPS (TTM)	-13.00
Day's Range	67.09 - 68.88	Earnings Date	N/A
52 Week Range	46.76 - 84.49	Forward Dividend & Yield	2.42 (3.74%)
Volume	6,358	Ex-Dividend Date	Apr 28, 2021
Avg. Volume	4,766	1y Target Est	N/A

Fair Value
XX.XX N/A
View details

Related Research
The Argus Dividend Growth Mod...
Analyst Report: Pfizer Inc.
View more

1D 5D 1M 6M YTD 1Y 5Y Max | Full screen



Trade prices are not sourced from all markets

Chart Events
Neutral *pattern detected*
View all chart patterns

Performance Outlook

Short Term	Mid Term	Long Term
2W - 6W	6W - 9M	9M+

Source: Yahoo Finance. Accessed May 12, 2021

Eli Lilly and Company (NYSE : LLY)

Lilly is a global health care leader that unites caring with discovery to create medicines that make life better for people around the world. We were founded more than a century ago by a man committed to creating high-quality medicines that meet real needs, and today we remain true to that mission in all our work. Across the globe, Lilly employees work to discover and bring life-changing medicines to those who need them, improve the understanding and management of disease, and give back to communities through philanthropy and volunteerism.

Eli Lilly and Company (NYSE : LLY)

193.20 -1.55 (-0.80%)
At close: May 12 4:02PM EDT

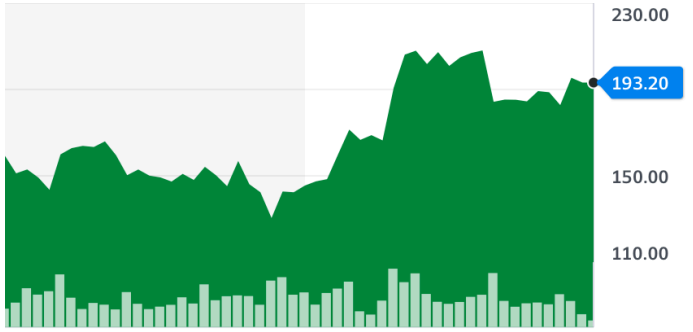
Summary | Company Outlook | Chart | Conversations | Statistics | Historical Data | Profile | Financials | Analysis | Options

Previous Close	194.75	Market Cap	185.284B
Open	194.75	Beta (5Y Monthly)	0.25
Bid	0.00 x 900	PE Ratio (TTM)	28.92
Ask	0.00 x 800	EPS (TTM)	6.68
Day's Range	192.73 - 195.65	Earnings Date	Aug 03, 2021
52 Week Range	129.21 - 218.00	Forward Dividend & Yield	3.40 (1.75%)
Volume	2,302,123	Ex-Dividend Date	May 13, 2021
Avg. Volume	3,449,700	1y Target Est	213.57

Fair Value
XX.XX **Near Fair Value**
19% Est. Return
View details

Related Research
The Argus Dividend Growth Mod...
Market Update: CAKE, CAT, DPZ,...
View more

1D 5D 1M 6M YTD 1Y 5Y Max | Full screen



Trade prices are not sourced from all markets

Chart Events
Bearish *pattern detected*
Engulfing Line (Bearish)
View all chart patterns

Performance Outlook

Short Term	Mid Term	Long Term
2W - 6W	6W - 9M	9M+

Source: Yahoo Finance. Accessed May 12, 2021

Pfizer Inc. (NYSE: PFE)

Pfizer Inc. is a research-based, global biopharmaceutical company. We apply science and our global resources to bring therapies to people that extend and significantly improve their lives through the discovery, development, manufacture, marketing, sales and distribution of biopharmaceutical products worldwide. We work across developed and emerging markets to advance wellness, prevention, treatments and cures that challenge the most feared diseases of our time. We collaborate with healthcare providers, governments and local communities to support and expand access to reliable, affordable healthcare around the world. The Company was incorporated under the laws of the State of Delaware on June 2, 1942.

Pfizer Inc. (NYSE: PFE)

39.69 +0.34 (+0.86%)
At close: May 12 4:02PM EDT

Summary | Company Outlook | Chart | Conversations | Statistics | Historical Data | Profile | Financials | Analysis | Options

Previous Close	39.35	Market Cap	221.397B
Open	39.44	Beta (5Y Monthly)	0.67
Bid	0.00 x 1400	PE Ratio (TTM)	20.11
Ask	0.00 x 3200	EPS (TTM)	1.97
Day's Range	39.31 - 39.92	Earnings Date	Jul 26, 2021 - Jul 30, 2021
52 Week Range	29.99 - 43.08	Forward Dividend & Yield	1.56 (3.96%)
Volume	25,728,261	Ex-Dividend Date	May 06, 2021
Avg. Volume	30,451,453	1y Target Est	42.46

Fair Value
XX.XX — Overvalued
-23% Est. Return
View details

Related Research
Morningstar | A Weekly Summar...
Analyst Report: Pfizer Inc.
View more

Chart Events
Bearish *pattern detected*
Williams %R
View all chart patterns

Performance Outlook

Short Term	Mid Term	Long Term
2W - 6W	6W - 9M	9M+

Source: Yahoo Finance. Accessed May 12, 2021

Merck & Co., Inc. (NYSE: MRK)

For 130 years, Merck, known as MSD outside of the United States and Canada, has been inventing for life, bringing forward medicines and vaccines for many of the world's most challenging diseases in pursuit of our mission to save and improve lives. We demonstrate our commitment to patients and population health by increasing access to health care through far-reaching policies, programs and partnerships. Today, Merck continues to be at the forefront of research to prevent and treat diseases that threaten people and animals – including cancer, infectious diseases such as HIV and Ebola, and emerging animal diseases – as we aspire to be the premier research-intensive biopharmaceutical company in the world.

Merck & Co., Inc. (NYSE: MRK)

MERCK

78.00 +0.54 (+0.70%)
At close: May 12 4:02PM EDT

Summary | Company Outlook | Chart | Conversations | Statistics | Historical Data | Profile | Financials | Analysis | Options

Previous Close	77.46	Market Cap	197.501B
Open	77.71	Beta (5Y Monthly)	0.41
Bid	0.00 x 1300	PE Ratio (TTM)	28.17
Ask	0.00 x 1000	EPS (TTM)	2.77
Day's Range	77.30 - 78.53	Earnings Date	Jul 29, 2021
52 Week Range	71.72 - 87.80	Forward Dividend & Yield	2.60 (3.33%)
Volume	12,185,395	Ex-Dividend Date	Mar 12, 2021
Avg. Volume	12,466,993	1y Target Est	94.02

Fair Value
XX.XX **Overvalued**
-3% Est. Return
View details

Related Research
Analyst Report: Merck & Co., Inc.
Analyst Report: Merck & Co., Inc.
View more

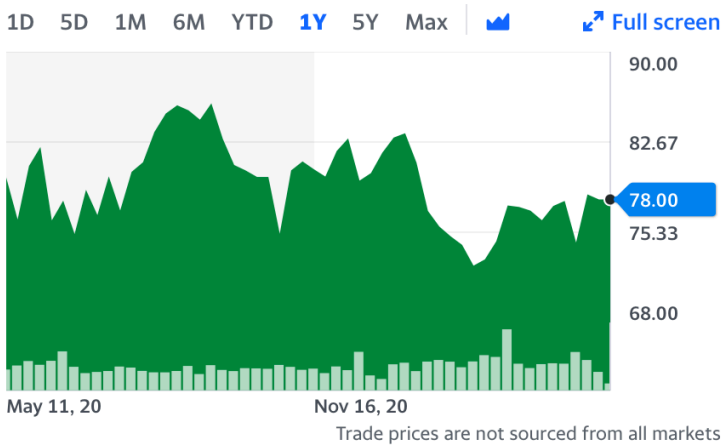


Chart Events
Bullish *pattern detected*
Price Crosses Moving Average
View all chart patterns

Performance Outlook

Short Term	Mid Term	Long Term
2W - 6W	6W - 9M	9M+

Source: Yahoo Finance. Accessed May 12, 2021

AstraZeneca PLC (NasdaqGS: AZN)

AstraZeneca (LSE/STO/Nasdaq: AZN) is a global, science-led biopharmaceutical company that focuses on the discovery, development and commercialisation of prescription medicines, primarily for the treatment of diseases in three therapy areas - Oncology, Cardiovascular, Renal & Metabolism and Respiratory & Immunology. AstraZeneca operates in over 100 countries and its innovative medicines are used by millions of patients worldwide.

AstraZeneca PLC (NasdaqGS: AZN)

AstraZeneca

54.50 +0.40 (+0.74%)
At close: May 12 4:00PM EDT

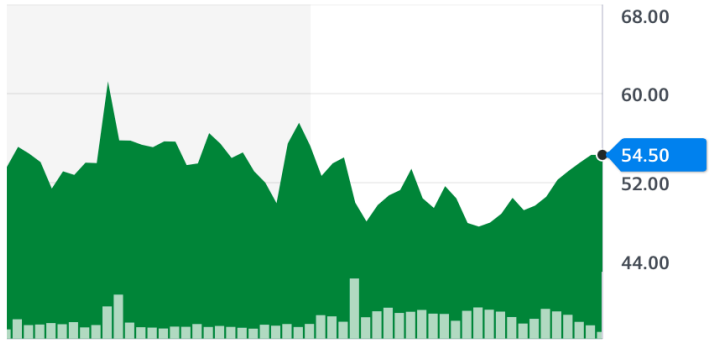
Summary | Company Outlook | Chart | Conversations | Statistics | Historical Data | Profile | Financials | Analysis | Options

Previous Close	54.10	Market Cap	142.604B
Open	54.72	Beta (5Y Monthly)	0.21
Bid	0.00 x 3000	PE Ratio (TTM)	35.96
Ask	0.00 x 3000	EPS (TTM)	1.52
Day's Range	54.38 - 55.02	Earnings Date	N/A
52 Week Range	46.48 - 64.94	Forward Dividend & Yield	1.40 (2.59%)
Volume	8,345,504	Ex-Dividend Date	Feb 25, 2021
Avg. Volume	10,167,671	1y Target Est	63.60

Fair Value
XX.XX — Overvalued
-27% Est. Return
View details

Related Research
Analyst Report: AstraZeneca PLC
Analyst Report: AstraZeneca PLC
View more

1D 5D 1M 6M YTD 1Y 5Y Max | Full screen



Trade prices are not sourced from all markets

Chart Events
Neutral *pattern detected*
Commodity Channel Index
View all chart patterns

Performance Outlook

Short Term	Mid Term	Long Term
2W - 6W	6W - 9M	9M+

Source: Yahoo Finance. Accessed May 12, 2021

Disclaimer

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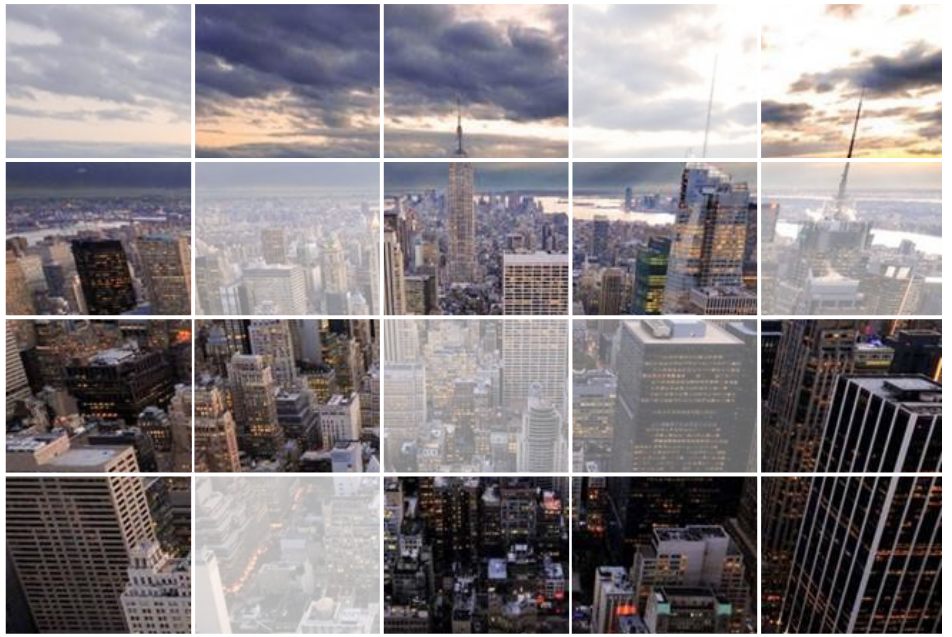
Thank you!



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