



The Biopharmaceutical Industry's Efforts to Beat Coronavirus

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P/RMA
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Our Commitment to Beat Coronavirus



Our Commitment to *Beat* Coronavirus

We are **rapidly screening our vast global libraries of medicines** to identify potential treatments and have numerous clinical trials underway to test new and existing therapies

We are **dedicating our top scientists and using our investments in new technologies** to speed the development of safe and effective vaccines

We are **sharing the learnings from clinical trials in real time** with governments and other companies to advance the development of additional therapies

We are **expanding our unique manufacturing capabilities and sharing available capacity** to ramp up production once a successful medicine or vaccine is developed

We are **collaborating with government agencies, hospitals, doctors and others** to donate supplies and medicines to help those affected around the world

We are **working with governments and insurers** to ensure that when new treatments and vaccines are approved they will be available and affordable for patients

Factors Contributing to the Industry's Response

Armed with experience garnered from previous outbreaks and a vast storehouse of knowledge about infectious diseases like influenza, malaria and HIV, researchers are working to develop and deliver diagnostics, treatments and vaccines to save lives and restore the rhythms of daily life for billions of people.

DIAGNOSTICS

It's essential to know who has been infected.

- Companies are accelerating the development of diagnostic testing capabilities to scale-up screening and working in partnership with governments and diagnostic companies on existing screening programs to supplement testing.

EXISTING MEDICINES

Medicines approved for other diseases may have some benefit for patients with COVID-19.

- Researchers are testing antivirals, antibiotics and other medicines.
- These medicines have the potential to reduce the burden of COVID-19 on hospitals by reducing the length and severity of disease.

NEW TREATMENTS

Various drugs are in development, with some entering human trials.

- Researchers are working on new antiviral medications to interfere with ways the virus infects cells and reproduces.
- Antibody-based drugs may be able to mobilize the immune system against the virus.

VACCINES

A vaccine would provide a preventive approach to beating COVID-19.

- Although vaccines can take longer to develop than other treatments, once enough people in a community are vaccinated, individuals are protected and the community risk of transmission is reduced. A variety of biopharmaceutical companies are taking different approaches to find a vaccine. More "shots on goal" will significantly increase the chances of success.

MANUFACTURING

We are committed to manufacturing these medicines and making them available to those who need them.

- We're ramping up output of existing medicines with demonstrated benefit and investing in infrastructure to accelerate production of new treatments.
- Biopharmaceutical companies are planning and building manufacturing capacity without assurance medicine and vaccine candidates will ultimately be successful, to ensure that if one is, distribution can occur rapidly.
- America's biopharmaceutical companies are ensuring that solutions can be made available quickly to everyone who needs them.



Supporting Diagnostic Efforts and Developing Treatments and Vaccines

Working Closely with FDA to Support Diagnostic and Serological Testing



FDA has issued **120 emergency use authorizations** for COVID-19 diagnostic tests

Data as of 6/19/2020

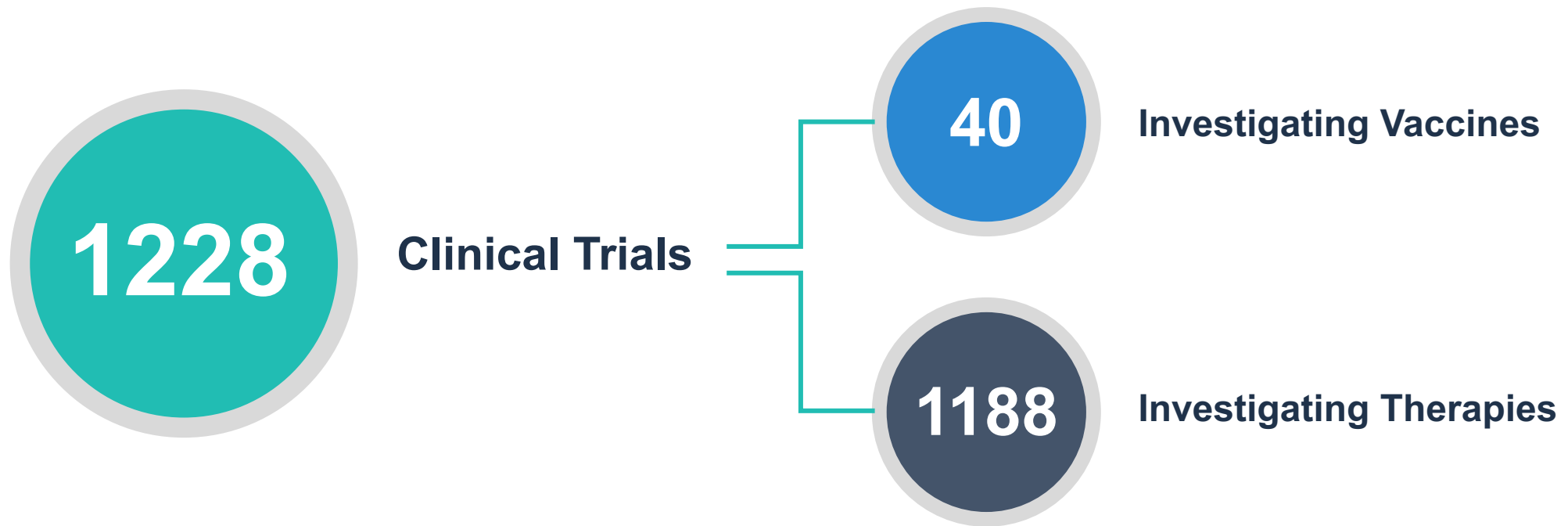


196 serological tests to evaluate antibodies to SARS-CoV-2 are being offered in the United States

[FDA Diagnostic FAQs](#)

Developing Treatments and Vaccines to Fight COVID-19

There are **1228 clinical trials** under way
across the globe for vaccinations and treatments.

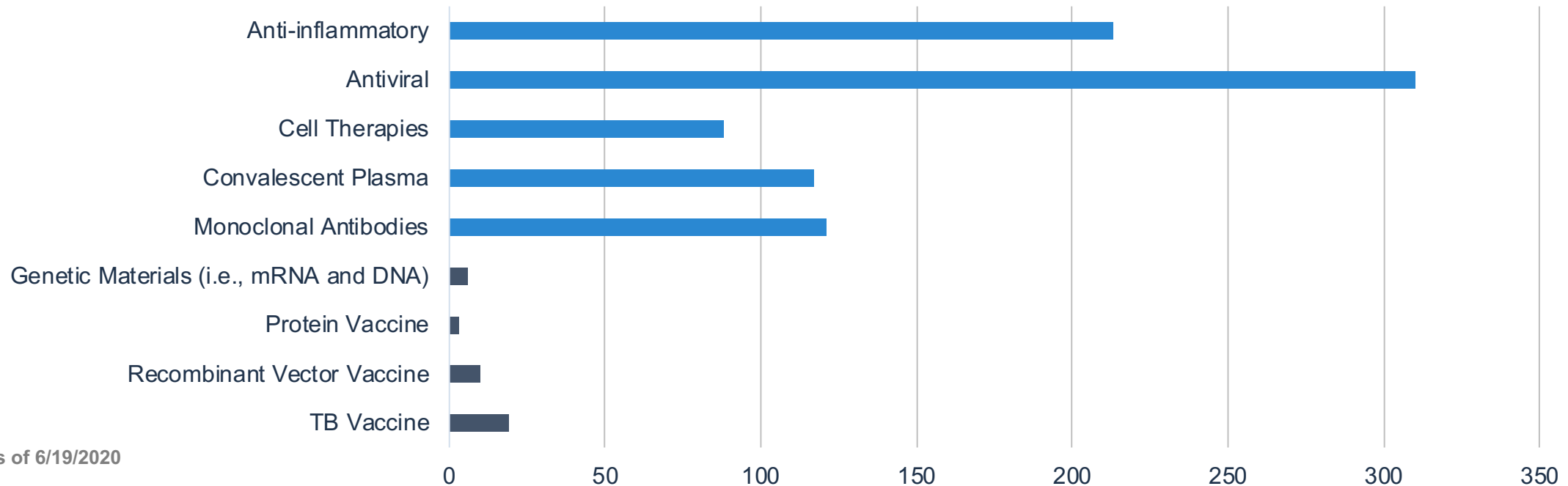


Data as of 6/19/2020

Building a Diverse Research and Development Pipeline

These hundreds of clinical trials represent **multiple approaches for COVID-19 vaccines and therapies.**

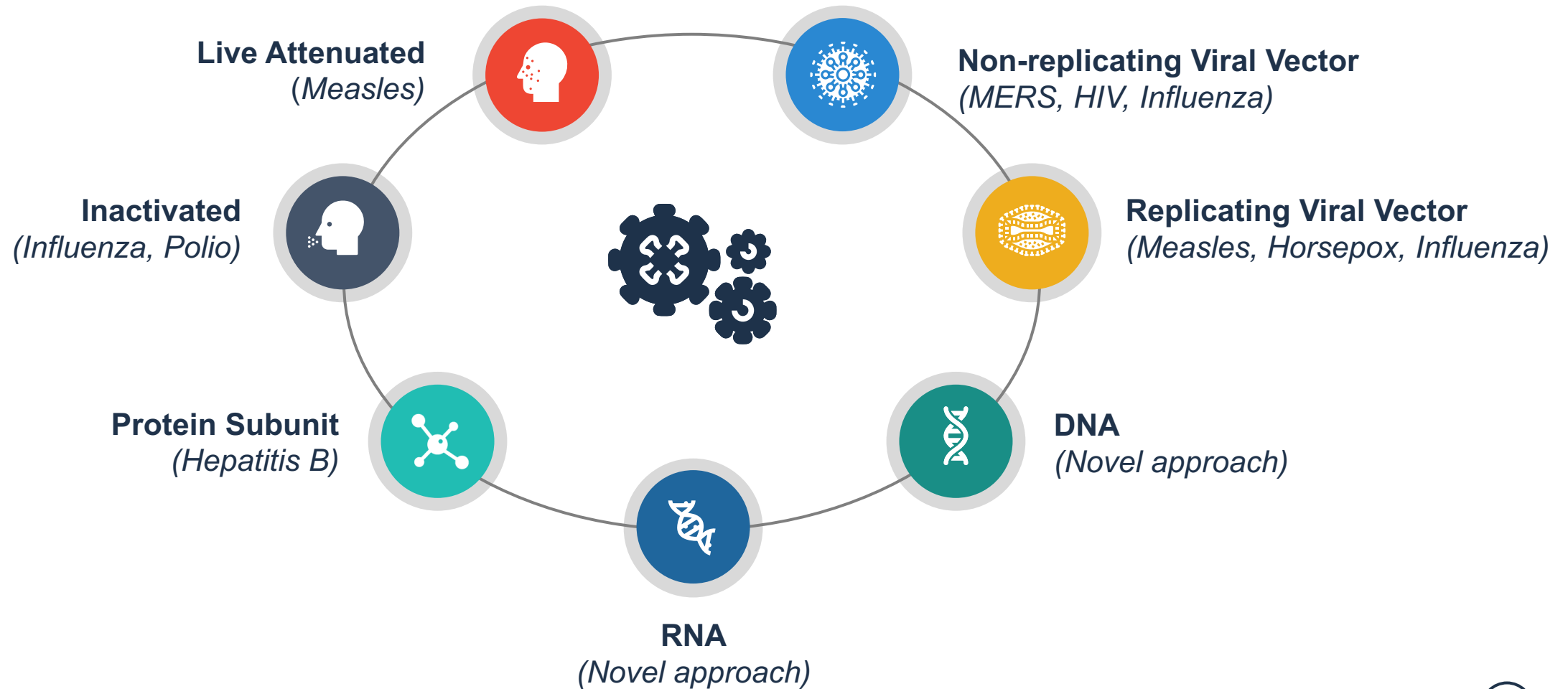
Number of Trials Testing Types of Therapies and Vaccines for COVID-19



Data as of 6/19/2020

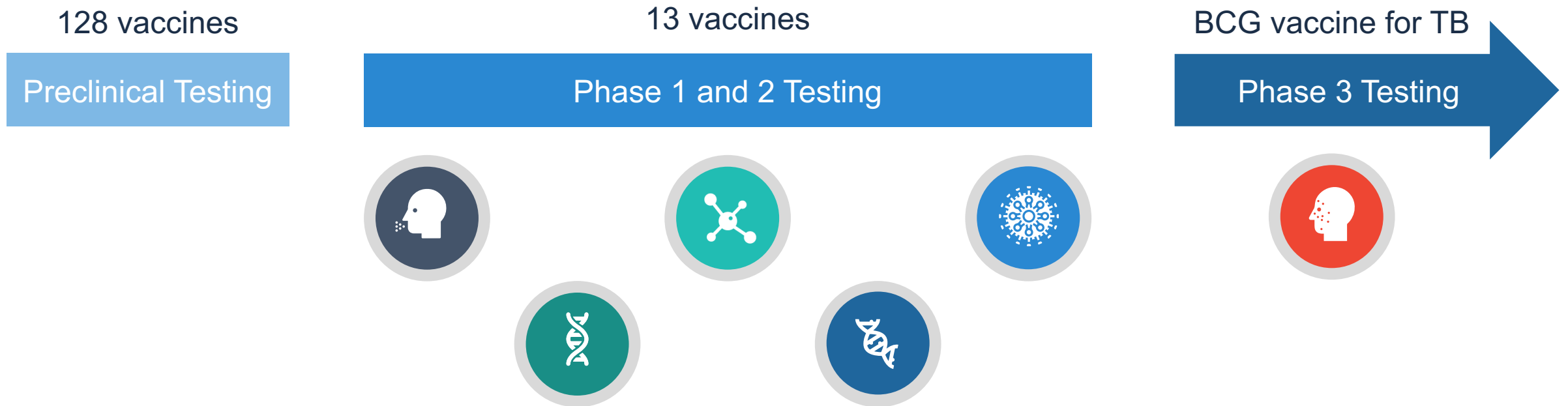
Source: World Health Organization International Clinical Trials Registry Platform (ICTRP)

Using Many Approaches to Develop Vaccines



Developing and Testing Vaccines to Prevent COVID-19

COVID-19 vaccines currently under investigation include **over 140 unique “shots on goal”**



Data as of 6/19/2020

It Will Take a Minimum of 18 to 24 Months for Potential FDA Approval of a COVID-19 Vaccine

Faster Timeline

- **This is significantly less time than it has taken for previous vaccine development programs**
 - In 2003, it took 20 months from sequencing SARS to the first human study of a vaccine
 - Today, it has been less than 4 months from sequencing SARS-CoV-2 to the first human study of a vaccine

Differing Approaches

- **Some approaches offer speed**
 - Knowing the virus's genetic sequence, companies can synthesize and scale up production of a RNA vaccine in a matter of weeks
- **Some approaches can boost the impact of a potential vaccine**
 - Adjuvants can boost the immune response and minimize the amount of vaccine needed

Failure Rate

- **There is a high failure rate**
 - Only 5-10% are likely to succeed
 - We need lots of shots on goal

Developing and Testing Therapies to Treat COVID-19

There are **1188 clinical trials** across the globe to test **395 therapies** to treat COVID-19

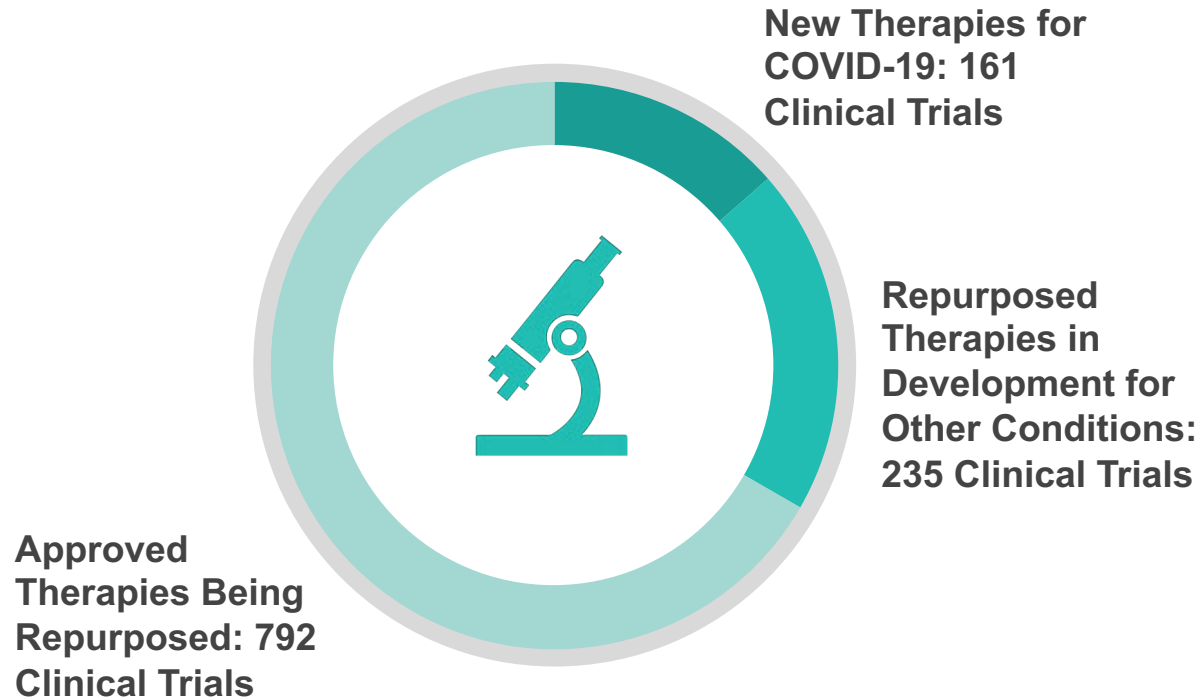
Number Of Unique Therapies Under Investigation



Data as of 6/19/2020

Investigational Therapies to Treat COVID-19

Where the Investigational Therapies Came From



Data as of 6/19/2020

What The Investigational Therapies are Targeting





Where to Go for More Information

For More Resources and Information, Visit [phrma-jp.org/Coronavirus \(Japan\)](https://phrma-jp.org/Coronavirus) | [phrma.org/Coronavirus \(US\)](https://phrma.org/Coronavirus)



An up-to-date list of member company efforts to combat COVID-19



A factsheet on the pipeline for new vaccine and treatments



An open letter from PhRMA's CEO and PhRMA's Chairman of the Board



The latest Catalyst blog posts on COVID-19



An infographic on how the industry is fighting COVID-19