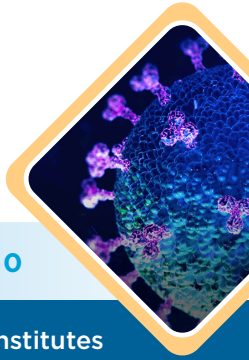


# AN UNPRECEDENTED IMPACT

A SERIES OF FACT SHEETS ON COVID-19 AND BIOMEDICAL RESEARCH

JUNE 2020



We must maintain and strengthen our nation's investment in medical research through the National Institutes of Health. This is an urgent priority for Congress, as our nation works to restart stalled research, keep up with pressing public health challenges, continue to fight COVID-19 and prepare for the next potential pandemic.

## PART 1 | THE EFFORT TO COMBAT COVID-19

Never before has so much research energy and effort been deployed to understand, detect, and fight a single virus.

America's investment in medical research through the National Institutes of Health (NIH) over the past years and decades has provided an incredibly strong platform from which to jumpstart the identification of COVID-19 diagnostics, vaccines and treatments. This direct support of hundreds of thousands of researchers across country, combined with the R&D investments of life sciences and biopharmaceutical companies, has positioned the United States to be at the forefront of this enormous global effort.

**American biotech companies and innovations are playing an out-sized role in the search for therapies to prevent and treat COVID-19.**

AS OF JUNE 5, 2020

**548 unique compounds** are in development to combat, treat and eradicate COVID-19 globally

**274** are by **U.S.-based companies** with 223 involving small biotech companies

Of total compounds



Source: [BIO](#)

**Researchers and biopharmaceutical companies are moving quickly to understand this virus and get medicines into human clinical trials.**

AS OF JUNE 5, 2020

More than **1,100 clinical trials** are testing COVID-19 treatments and vaccines globally

Over **250 trials** are in the United States

Over **30 trials** are testing a vaccine

**Nearly 145 trials** are testing novel compounds and over 725 are testing antiviral combinations and medicines approved for other indications

Source: [PhRMA](#)

**Thanks to bipartisan congressional support for supplemental funding for NIH, two programs to accelerate the development of COVID-19 vaccines and diagnostic tools are underway.**



**The Rapid Acceleration of Diagnostics (RADx) initiative** aims to identify and speed development of innovative technologies to facilitate rapid and widely accessible COVID-19 testing.



**Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV)** is a public-private partnership, organized by NIH, to develop a coordinated research strategy for prioritizing and speeding development of the most promising vaccines and treatments.

Now is the time for that unmatched American ingenuity to bring the best and most innovative technologies forward to make testing for COVID-19 widely available.

NIH Director Dr. Francis Collins

**Diagnostic tools that are fast, accurate, easy to use and widely available on a mass scale are needed to provide the COVID-19 testing that will enable society to return to any sense of normalcy.**

- ✓ According to [AdvaMed](#), by late April, **more than 30 molecular diagnostics for COVID-19 had received FDA Emergency Use Authorization (EUA)** and three COVID-19 antibody blood tests had received EUAs.
- ✓ As of June 4, over **18,680,000 COVID-19 tests had been administered** in the United States, according to the [Johns Hopkins Coronavirus Resource Center](#).

## UNPRECEDENTED IMPACT, *cont.*

Researchers around the world and throughout the United States are laser-focused on understanding, mitigating, treating and eradicating the pandemic. Many, in the space of hours, pivoted their work in other areas toward COVID-19 and SARS-CoV-2, the virus that causes COVID-19. Collaboration has replaced competition and there is an emphasis on open sharing of data and research findings.



Up to **200 million** physicians, scientists, nurses, technologists and engineers are now taking aim at COVID-19. They are running tens of thousands of experiments and sharing information “with a transparency and at speeds we’ve never seen before,” says [Peter Diamandis](#), XPrize Foundation founder.

By late May, researchers around the globe had published more than **13,700** papers on SARS-CoV-2 or COVID-19; as of early June, more than **4,754** preprints had been to the main repositories for biology and health sciences – bioRxiv and medRxiv.



### The Johns Hopkins University

[Coronavirus Resource Center](#) is the source for global data on cases of COVID-19, associated deaths and myriad other metrics and is **accessed more than 1.2 billion times a day**. Now, with a recent NIH grant, the [JHU professor](#) behind this database is collaborating with scientists at Scripps Research and UCLA to develop new tools to understand and predict the spread of the disease.



### Stanford Medicine scientists launched a national daily health

**survey to identify the prevalence of COVID-19 symptoms in U.S. communities** with the goal to predict surges and enable more informed response efforts. By late April the survey had reached more than **500,000** people.



### The Massachusetts Consortium on Pathogen Readiness (MassCPR) harnesses the expertise of the greater Boston area

including, [Harvard University](#), [Massachusetts Institute of Technology \(MIT\)](#), [Boston University](#), [Tufts University](#) and [University of Massachusetts](#) along with local biomedical research institutes, biotech companies and academic medical centers. It aims to address the immediate need for COVID-19 diagnostics, treatments and vaccines and create a rapid response system to address future health crises.



### Washington University School of Medicine in St. Louis is one of 30+

genome sequencing hubs worldwide participating in a **study to sequence the DNA of young, healthy adults and children who develop severe cases of COVID-19** despite having no underlying medical problems. The study will also look at people who never become infected despite repeated exposures. Understanding COVID-19’s extremes could lead to new therapeutic strategies for the illness.



### The Center for Research on Coronaviruses and Other Emerging Pathogens at the

**University of Pennsylvania aims to advance research to better understand the pathology of the coronavirus** and support the development of potential vaccines, diagnostic tools and effective therapies. Immediate efforts include screening a variety of potential therapies for activity against SARS-CoV-2.



### Northwestern University researchers have developed a new antibody

**test to identify prior exposure to COVID-19**. The approach combines the convenience of finger stick blood sampling in the home with the analytical rigor that can be applied in the lab. This approach overcomes the logistical challenges of blood collection, facilitating collection of samples in non-clinical settings at low cost.



### AstraZeneca and Vanderbilt University Medical Center teamed up to identify candidates for antibody-

**based treatments** that could protect people exposed to COVID-19. They are building off work by researchers at the [Vanderbilt Vaccine Center \(VVC\)](#) to build a comprehensive “toolkit” to identify and analyze antibodies from the blood of survivors for their ability to neutralize SARS-CoV-2. Applying lessons learned in the developing world, **Vanderbilt University professors have built, and released for public use nationwide, an app-based screening tool for individuals to use to assess their risk of being infected with COVID-19**. When used by healthcare providers and public health agencies the app can expedite pre-screening of patients and provide real-time data to identify emerging hot spots.

