

# Life Science Innovations Fight COVID-19

Millions of people across the globe have contracted COVID-19, and hundreds of thousands have had lives ended too soon. Trillions of dollars have been lost and it's difficult to predict when life may get back to normal as it will most likely be dependent on reliable tests, treatments and vaccines developed by life science companies - many located here in California. These researchers, scientists, and manufacturers are working tirelessly, in an unprecedented spirit of collaboration, to develop lifesaving medical innovations to help diagnose, treat and eventually prevent this deadly virus so we can get our lives and our economy back on track.



*\*As of publication*

*“Every day, we talk to scientists at universities and small companies, CEOs of pharmaceutical companies, or heads of government to make sure that the new tools become available as soon as possible. And there are so many heroes to admire right now, including the health workers on the front line. When the world eventually declares Pandemic 1 over, we will have all of them to thank for it.”*

- Bill Gates



## TESTING

The most immediate need in the battle against COVID-19 is for diagnostic tests to quickly and effectively determine if individuals are infected or were infected with the virus. Companies both large and small have swiftly developed these tests, with several receiving emergency use authorization from the U.S. Food and Drug Administration (FDA) to be used immediately. Ultimately, inexpensive test kits or home kits that offer quick results will be the key to curbing the outbreak and will be on the market soon. Visit: [fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations#coronavirus](https://www.fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations#coronavirus)



## TREATMENTS

There are currently no FDA-approved COVID-19 treatments, but biopharmaceutical researchers are examining existing drugs and researching and developing new therapies to treat severe respiratory symptoms, prevent the virus from growing in the body and alleviating symptoms. Existing medicines are being given to patients with COVID-19, and novel treatments are moving through the clinical trial process and will be available within months. These antibody and antiviral-based drugs and other treatments will:

- Work to interfere with ways the virus infects cells and reproduces
- Mobilize the immune system against the virus
- Help those in the worst throws of the disease
- Most importantly, lower the overall mortality rate



## VACCINES

The best weapon to combat COVID-19 and prevent transmission is a vaccine. While vaccine development isn't easy and often takes years to be ready for widespread use, rapid process is being made. Multiple large-scale biopharma companies as well as small start-ups worldwide are working nonstop to develop dozens of potential new vaccines, with the hope of inoculating people by late fall or early 2021.

## Biopharma Companies with a CA Presence Developing Diagnostics, Treatments and Vaccines\*

Company	Testing	Treatments	Vaccines
Abbott	x		
AbbVie		x	
Amgen		x	
Ansun Biopharma		x	
Arcturus Therapeutics			x
AstraZeneca		x	x
Augmenta Bioworks		x	
Bristol Myers Squibb		x	x
BioNTech			x
CalciMedica		x	
Capricor Therapeutics		x	
Cepheid	x		
CSL Behring		x	
Cue Health	x		
Eli Lilly and Company		x	
Genalyte	x		

Company	Testing	Treatments	Vaccines
Gilead Sciences		x	
GlaxoSmithKline			x
Grifols	x	x	x
INOVIO Pharmaceuticals			x
Johnson & Johnson		x	x
Leading Biosciences		x	
Novartis		x	
Pfizer		x	x
Quidel Corporation	x		
Roivant Sciences		x	
Sanofi			x
Takeda		x	
Thermo Fisher Scientific	x		
UCB		x	
Vaxart			x
Vir Biotechnology		x	

Partial List

**\$ FUNDING, EQUIPMENT & PARTNERSHIPS** The life sciences industry is providing billions of dollars in funding and in-kind donations to organizations who are on the front lines of combatting COVID-19. They are also providing medicine, personal protection equipment, testing materials and other critical medical supplies to support patients, healthcare workers, first responders and local governments in addressing this deadly virus. And they are collaborating with U.S. and global public health leaders on accelerated research and development. In fact, 16 of these companies entered into a sweeping public-private partnership with the National Institutes of Health known as Accelerating COVID-19 Therapeutic Interventions and Vaccines, or ACTIV, aimed at coordinating and accelerating the development of COVID-19 treatments and vaccines.

“In the state of California, we pride ourselves on being a center of innovation and entrepreneurial spirit that defines the best of this state. More researchers, more developers, more scientists and engineers than any other state in America... in clinical trials with treatments and with many antiviral drugs and palliative care drugs that are in the testing process.”

- Governor Gavin Newsom