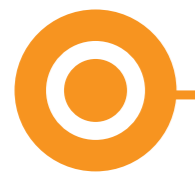


# COVID-19 Timeline of Life Science Medical Innovations

**2019**  
December



An acute respiratory illness linked to a novel coronavirus (COVID-19) is discovered.

**2020**  
January



Genetic sequence of the virus is obtained and shared with worldwide researchers.

February



The first suspected U.S. COVID-19 death is reported.

March



- WHO declares global pandemic.
- U.S. declares a national emergency.
- CA issues stay-at-home order.

February - April



Genetic tests to detect COVID-19 discovered, FDA-approved, and manufactured in mass quantities.

April



- COVID-19 cases reach 1 million worldwide.
- Moderna, Pfizer/BioNTech, Johnson & Johnson and Astra Zeneca complete preclinical R&D of mRNA vaccine candidates.
- Over 150 COVID-19 discoveries are in development.

June



Over 130 vaccines are in development, with 16 in clinical trials.

September



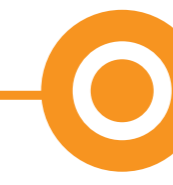
Global deaths from COVID-19 reach 1 million.

October



FDA approves Gilead's remdesivir for use in COVID-19 patients ages 12 and older requiring hospitalization.

December



FDA Emergency Use Authorization (EUA) given to Moderna, Pfizer/BioNTech, and Johnson & Johnson vaccines; and Eli Lilly's Bamlanivimab treatment for COVID-19.

**2021**  
January



COVID-19 vaccine distribution begins. By May, 1 billion vaccinations are administered worldwide.

March



After 1 year of the global pandemic: 118 million confirmed cases; 2.6 million deaths; 66.7 million recovered; and 70.5 million people fully vaccinated.

May



FDA EUA for Pfizer's vaccine to be used in children ages 12-15.

June



A newer, more contagious COVID Delta variant becomes dominant strain causing a significant spike in COVID-19 cases, hospitalizations and deaths.

August



FDA gives full approval for Pfizer/BioNTech's COVID-19 vaccine, Comirnaty, for the prevention of COVID-19 in people 16 years and older.

September



FDA approves booster doses for the first time.

November



- Pfizer/BioNTech vaccine approved for children ages 5-11.
- Omicron, a less deadly but more contagious variant, is detected and spreads worldwide.
- COVID-19 vaccines prevent over 1.1 million deaths and 10.3 million hospitalizations.

December



FDA EUA for two oral antiviral COVID-19 treatments, Pfizer's Paxlovid and Merck's Molnupiravir.

**2022**  
January



- Moderna's COVID-19 vaccine receives full FDA-approval, marketed as Spikevax, for people 18 years and older.
- Omicron BA.2 variant appears in U.S., becoming dominant strain.

March



The pandemic continues with over 447 million confirmed cases; 6 million deaths; 380 million recovered cases and 10.8 billion doses of COVID-19 vaccines administered.

April



- 6,445 total COVID-19 clinical trials are being conducted.
- 425 diagnostic tests and sample collection devices received FDA-approval or FDA EUA.
- 3 vaccines have received FDA-approval with another 119 in clinical trials.
- 14 COVID-19 treatments have received FDA EUA with over 1,000 more in clinical trials.
- **2.2 million deaths; 17 million hospitalizations; and 66.1 million additional infections prevented due to COVID-19 vaccines.**