



## COVID-19 Digest Issue 39

January 21, 2021

### CLINICAL PEARLS

- [According to results released in a preprint, non-peer reviewed biorxiv article](#), the **COVID-19 vaccine developed by Pfizer and BioNTech is likely to protect against the fast-spreading “UK variant” of the virus.** Sera from 16 vaccinated participants in prior clinical trials were exposed to SARS-CoV-2-S pseudoviruses bearing either the Wuhan reference strain or the B.1.1.7 lineage spike protein. The immune sera had equivalent neutralizing titers to both variants.
- According to a paper recently published in [Cell](#), the **two signaling molecules IFN-gamma and TNF-alpha work synergistically to cause massive cell death and tissue damage in SARS-CoV-2 infection.** These two proinflammatory signals, when administered to mice together, caused the same spectrum of damage seen in critical and lethal COVID-19 cases. Importantly, **monoclonal antibody treatments blocking these molecules protected mice with severe SARS-CoV-2 infection from death.** These pathways could be viable targets for clinical intervention in the most severe cases and most at-risk patients.
- Pharmaceutical prophylactics, or drugs that are taken to prevent infection, have been a key missing tool in the fight against COVID-19. British and Australian researchers have shown in a ferret model that [administering the TLR2/6 \(a sensor protein for invading microbes\) activator INNA-051 intranasally resulted in over 90% reduction in virus shed from both nose and throat compared to controls.](#) This and related strategies, which stimulate a first line of defense against invading pathogens, could help control the risk of COVID-19 transmission, especially in high-risk settings like congregate living environments.

### PUBLIC HEALTH UPDATES

- [CDC Expands Negative COVID-19 Test Requirement to All Air Passengers Entering the United States](#)
- Public Health England [Investigation of novel SARS-CoV-2 variant - Variant of Concern 202012/01 Technical briefing 3](#)
- San Mateo County [January 19, 2021 Health Officer Statement](#)

### GUIDANCE/GUIDELINES

- NIH [The COVID-19 Treatment Guidelines Panel’s Statement on the Use of Ivermectin for the Treatment of COVID-19](#)
- IDSA [COVID-19 Diagnostic Guidelines Updates](#)

### RESOURCES

- CDC
  - [Health Department-Reported Cases of Multisystem Inflammatory Syndrome in Children \(MIS-C\) in the United States](#)
  - [COVID-19 Genomic Epidemiology Toolkit](#)
  - [COVID-19 Science Updates](#)
  - [Clinician Outreach and Communication Activity Calls/Webinars Summaries and Slide Sets](#)
- CDC/IDSA [COVID-19 Clinician Calls](#)
- CDPH [Strategy for Skilled Nursing Facilities: Infection Prevention Education](#) including weekly Healthcare Facility Call Notes and weekly SNF Infection Prevention Call Notes
- JAMA Network [Coronavirus Critical Care Update - January 2021](#)
- New England Journal of Medicine [COVID-19 Vaccine Frequently Asked Questions](#)





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- AMA [Prioritizing Equity video series: Trustworthiness & Vaccines](#)
- The Atlantic [The COVID Tracking Project](#)
- Emory University [COVID-19 Health Equity Interactive Dashboard](#)

### ACADEMIC/RESEARCH PAPERS

- *bioRxiv*
  - [Neutralization of SARS-CoV-2 lineage B.1.1.7 pseudovirus by BNT162b2 vaccine-elicited human sera](#)
  - [Distinct Patterns of Emergence of SARS-CoV-2 Spike Variants including N501Y in Clinical Samples in Columbus Ohio](#)
- *Clinical Infectious Diseases*
  - [Confirmed Reinfection with SARS-CoV-2 Variant VOC-202012/01](#)
- *Nature*
  - [Circuits between infected macrophages and T cells in SARS-CoV-2 pneumonia](#)
- *Journal of Clinical Investigation*
  - [SARS-CoV-2-specific CD8+ T cell responses in convalescent COVID-19 individuals](#)
- *Emerging Microbes & Infections*
  - [Critical role of neutralizing antibody for SARS-CoV-2 reinfection and transmission](#)
- *New England Journal of Medicine*
  - [Interim Results of a Phase 1–2a Trial of Ad26.COVS Covid-19 Vaccine](#)
  - [Maintaining Safety with SARS-CoV-2 Vaccines](#)
  - [Convalescent Plasma Antibody Levels and the Risk of Death from Covid-19](#)
- *JAMA*
  - [Clinical Characteristics and Outcomes of Hospitalized Women Giving Birth With and Without COVID-19](#)
  - [Progression of Myopia in School-Aged Children After COVID-19 Home Confinement](#)
  - [Trends in Pediatric Hospitalizations for Coronavirus Disease 2019](#)
  - [Comparison of Saliva and Nasopharyngeal Swab Nucleic Acid Amplification Testing for Detection of SARS-CoV-2 - A Systematic Review and Meta-analysis](#)
- *Annals of Internal Medicine*
  - [The Sensitivity and Costs of Testing for SARS-CoV-2 Infection With Saliva Versus Nasopharyngeal Swabs - A Systematic Review and Meta-analysis](#)
  - [Preterm Birth and Stillbirth During the COVID-19 Pandemic in Sweden: A Nationwide Cohort Study](#)
- *The Journal of Infectious Diseases*
  - [Nature and dimensions of the systemic hyper-inflammation and its attenuation by convalescent plasma in severe COVID-19](#)
  - [SARS-CoV-2 Serologic Assays in Control and Unknown Populations Demonstrate the Necessity of Virus Neutralization Testing](#)
- *Cleveland Journal of Medicine*
  - [COVID-19 diagnostic testing and the psychology of precautions fatigue](#)
- *Lancet*
  - [Neurological infections in 2020: COVID-19 takes centre stage](#)
- *Emerging Infectious Diseases*
  - [Lung Pathology of Mutually Exclusive Co-infection with SARS-CoV-2 and \*Streptococcus pneumoniae\*](#)
- *Journal of the American College of Cardiology*
  - [Cardiovascular Deaths During the COVID-19 Pandemic in the United States](#)





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- *BMJ Journals*
  - [Gut microbiota composition reflects disease severity and dysfunctional immune responses in patients with COVID-19](#)
  - [Severe clinical outcomes of COVID-19 associated with proton pump inhibitors: a nationwide cohort study with propensity score matching](#)
- *Science*
  - [Three-quarters attack rate of SARS-CoV-2 in the Brazilian Amazon during a largely unmitigated epidemic](#)
  - [Immunological characteristics govern the transition of COVID-19 to endemicity](#)
  - [Immunological memory to SARS-CoV-2 assessed for up to 8 months after infection](#)
- *medRxiv*
  - [Model-informed COVID-19 vaccine prioritization strategies by age and serostatus](#)
  - [The association between mechanical ventilator availability and mortality risk in intensive care patients with COVID-19: A national retrospective cohort study](#)
  - [School closures and SARS-CoV-2. Evidence from Sweden's partial school closure](#)
- *Centre for Research & Analysis of Migration*
  - [The Role of Schools in Transmission of the SARS-CoV-2 Virus: Quasi-Experimental Evidence from Germany](#)
- *Journal of Public Economics*
  - [What the COVID-19 School Closure Left in Its Wake: Evidence from a Regression Discontinuity Analysis in Japan](#)

## MMWR

- [Emergence of SARS-CoV-2 B.1.1.7 Lineage — United States, December 29, 2020–January 12, 2021](#)
- [COVID-19 Trends Among Persons Aged 0–24 Years — United States, March 1–December 12, 2020](#)
- [Evaluation of Abbott BinaxNOW Rapid Antigen Test for SARS-CoV-2 Infection at Two Community-Based Testing Sites — Pima County, Arizona, November 3–17, 2020](#)

## HOT OFF THE (LAY) PRESS

- *Nature News*
  - [Could new COVID variants undermine vaccines? Labs scramble to find out](#)
- *The Atlantic*
  - [A Troubling New Pattern Among the Coronavirus Variants](#)
  - [Listen: Coronavirus Mutations](#)
  - [The Coronavirus Is Evolving Before Our Eyes](#)
- *New York Times*
  - [Coronavirus Vaccine Tracker](#)
  - [Underselling the Vaccine](#)
  - [Confused About the Vaccine Rollout? You're Not Alone](#)
  - [President-elect Joe Biden is planning to push for expanded access to the vaccine while emphasizing equity in distribution, including to those in jail.](#)
  - [Biden Pledges Federal Vaccine Campaign to Beat a Surging Coronavirus](#)
  - [States are scrambling after the Trump administration's vaccine promise falls apart](#)
  - [Overwhelmed, More States Turn to National Guard for Vaccine Help](#)
  - [Cash, Breakfasts and Firings: An All-Out Push to Vaccinate Wary Medical Workers](#)





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- [Inside a Nursing Home as Vaccine Arrives: 'I Hope Everybody Takes It'](#)
- [Doctor's Death After Covid Vaccine Is Being Investigated](#)
- [Johnson & Johnson Expects Vaccine Results Soon but Lags in Production](#)
- [Disappointing Chinese Vaccine Results Pose Setback for Developing World](#)
- [Facing New Outbreaks, China Places Over 22 Million on Lockdown](#)
- [One Year, 400,000 Coronavirus Deaths: How the U.S. Guaranteed Its Own Failure](#)
- [The faster-spreading variant of the coronavirus is projected to become the dominant source of infection in the U.S. by March, the C.D.C. said.](#)
- [How British Scientists Found the More Infectious Coronavirus Variant](#)
- [What Does a More Contagious Virus Mean for Schools?](#)
- [San Francisco's Tech Workers: They Can't Leave the Bay Area Fast Enough](#)
- [Coronavirus-related deaths have now surpassed two million around the world, just over a year after the virus was first detected in China.](#)
- [One Mask Is Good. Would Two Be Better?](#)
- *Medscape*
  - [5 Reasons to Wear a Mask Even After You're Vaccinated](#)
  - [Biden Chooses Ex FDA Chief Kessler to Help Lead US Vaccine Drive](#)
  - [The Next Likely COVID-19 Vaccine Has Its Advantages](#)
  - [Feds Plead for Greater Use of Monoclonal Antibodies to Fight COVID](#)
  - [Averting COVID Hospitalizations With Monoclonal Antibodies](#)
- *BBC News*
  - [Sinovac: Brazil results show Chinese vaccine 50.4% effective](#)
- *The Wall Street Journal*
  - [Chinese Covid-19 Vaccine Far Less Effective Than Initially Touted in Brazil](#)
  - [Israel's Covid-19 Vaccinations Hold Lessons for U.S.](#)
  - [The Science Behind How the Coronavirus Affects the Brain](#)
- *Medpage Today*
  - [The Distribution Debacle— "This should be a wartime mobilization for a wartime effort," says Leana Wen, MD](#)
- *The BMJ News*
  - [Covid-19: Norway investigates 23 deaths in frail elderly patients after vaccination](#)
- *Bloomberg*
  - [Norway Warns of Vaccination Risks for Sick Patients Over 80](#)
  - [Vaccine Skepticism Extends Even to Health Workers Fighting Covid](#)
  - [More Than 46.2 Million Shots Given: Covid-19 Vaccine Tracker](#)
  - [What Makes Building Ventilation Good Enough to Withstand a Pandemic?](#)
- *The Ohio State University Wexner Medical Center*
  - [Researchers Discover New Variant of COVID-19 Virus in Columbus, Ohio](#)
- *The Hill*
  - [WHO: Japan identifies another new coronavirus variant](#)
  - [Moderna says it's investigating reported allergic reactions to COVID-19 vaccine](#)
  - [California recommends pause in administering one batch of Moderna vaccine due to possible allergic reaction](#)
- *Moderna Press Releases*
  - [Statement on California Department of Public Health \(CDPH\) Report](#)





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- *USA Today*
  - [Moderna struggles to find 3,000 adolescent volunteers needed for COVID-19 vaccine trial](#)
- *Public Health England Press Releases*
  - [Past COVID-19 infection provides some immunity but people may still carry and transmit virus](#)
- *JAMA News*
  - [Health Workers' Antibody Levels Wane After SARS-CoV-2 Infection](#)
- *NEJM Journal Watch*
  - [Vaccine \[Rollout\] Reactions — In Support of Residents](#)
- *PBS*
  - [Medical community scrambles to understand COVID-19 'long haulers'](#)
  - [Inside the attempt to build trust about the COVID-19 vaccine in Black communities](#)
- *AMA*
  - [How to overcome COVID-19 vaccine hesitancy among Black patients](#)
- *NPR/KQED*
  - ['You Can't Treat If You Can't Empathize': Black Doctors Tackle Vaccine Hesitancy](#)
  - [Santa Clara County Jail Inmates Start Hunger Strike In Wake of COVID Outbreaks](#)
  - [4,400 Moderna Vaccine Doses Not Kept Cold Enough May Be Unusable](#)
  - [San Francisco Department of Public Health Expects to Run Out of Vaccine by Thursday](#)
- *Reuters*
  - [Biden unveils 5-point plan to speed vaccine rollout](#)
  - [Pfizer vaccine appears effective against coronavirus variant found in Britain - study](#)
  - [Pfizer says it has second doses of COVID-19 shot on hand, expects no U.S. supply problems](#)
  - [U.S. releases millions of COVID-19 doses, urges states to broaden vaccine access](#)
  - [U.S. to buy 1.25 million additional doses of Regeneron's COVID-19 antibody cocktail](#)
  - [COVID-19 infection gives some immunity for at least 5 months, UK study finds](#)
  - [COVID-19 infection gives some immunity, but virus can still be spread, study finds](#)
  - [U.S. to require negative COVID-19 tests for arriving international air passengers](#)
- *CNBC*
  - [No vaccine, no service: How vaccinations may affect travel plans in the future](#)
- *Science*
  - [After aborted attempt, sensitive WHO mission to study pandemic origins is on its way to China](#)
  - [COVID-19 measures also suppress flu—for now](#)
- *Los Angeles Times*
  - [UC, USC plan to have students back on campus in the fall for classes](#)
  - [More contagious coronavirus strain detected in L.A. County as total cases top 1 million](#)
  - ['Light at the end of tunnel' or a small blip? Flattening COVID-19 numbers bring guarded optimism in California.](#)
  - [Fight against COVID-19 hits wall of defiance in rural California: 'The excuses just go on'](#)
- *The Sacramento Bee*
  - [Stay-at-home COVID order lifted for greater Sacramento region](#)
- *The Washington Post*
  - [Another coronavirus variant linked to growing share of cases, several large outbreaks, in California](#)
- *Newsweek*
  - [L452R COVID Variant in California Linked to Several Outbreaks a 'Red Flag'](#)





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- *San Francisco Chronicle*
  - [Bay Area has its own scary new virus variant: Why experts are so concerned](#)
  - [California braces for troubling new variant as U.S. nears 400,000 deaths](#)
  - [New coronavirus variant found in Bay Area linked to massive Kaiser outbreak](#)
  - [Can vaccines keep up with coronavirus mutations? Bay Area variant will be a test](#)
  - [Bay Area funeral homes cope with COVID-19 onslaught, and things could get worse](#)
  - [COVID death rate steadily declining in California, even through recent surge](#)
  - [California calls for pause in use of huge batch of Moderna vaccines after allergic reactions](#)
  - [California has 2 million unused doses of vaccine even as demand soars. Here's why](#)
  - [California opens vaccinations to everyone 65 and older, as hospitals struggle with COVID-19 surge](#)
  - [California planning to make big changes to vaccination plan — after feds direct states to do so](#)
  - [‘We are flying blind’: Bay Area politicians say they’re in the dark about vaccine rollout](#)
  - [Moving California teachers to the front of the vaccine line might not be enough to reopen schools](#)
  - [Kaiser apologizes for long phone wait times amid huge vaccine demand](#)
  - [Two Bay Area community clinics cut through red tape to speed vaccines for seniors](#)
- *Cal Matters*
  - [Vaccine chaos: Californians scramble for shots amid mixed messaging](#)
- *CNN*
  - [Here's why we can have some hope about the Covid pandemic](#)

## EPIDEMIOLOGY UPDATES

- **CDC COVID Data Tracker**
  - [United States COVID-19 Cases and Deaths by State](#)
  - [COVID-19 Vaccinations in the United States](#)
- **US Leads the World in Confirmed COVID-19 Cases** per [Johns Hopkins University Center for Systems Science and Engineering Dashboard Website](#)
- **Johns Hopkins COVID-19 in the USA** – daily summary of key data on COVID-19 in the U.S.
- **California COVID-19 by the numbers** are available on the [CDPH Website](#) and the [NYT Map and Table](#) (includes data by county)
  - **California COVID-19 Statewide Update as of January 21, 2021**
- [San Mateo County COVID-19 Dashboard](#)
- [Santa Clara County COVID-19 Dashboard](#)

## ADDITIONAL COVID-19 RESOURCES

- [San Mateo County COVID-19 Guidance and Resources for Clinicians and Facilities – COVID-19 Digests](#)
- [Palo Alto Online tracking the coronavirus in San Mateo and Santa Clara counties](#)
- [California COVID-19 Data and Tools](#)
- [CDPH COVID-19 Assessment and Modeling Tool](#)
- [California Department of Corrections and Rehabilitations Population COVID-19 Tracking Dashboards](#)
- [COVID-19 Nursing Home Data](#)
- [CDC Interactive Serology Dashboard for Commercial Laboratory Surveys](#)
- [CDC COVID-19 Forecasts: Deaths](#)
- [HHS Coronavirus Data Hub](#)

