

COVID-19 RESPONSE FUNDING UPDATE

May 22-28, 2020

FACTS

\$ 79,542,584

Funds Mobilized

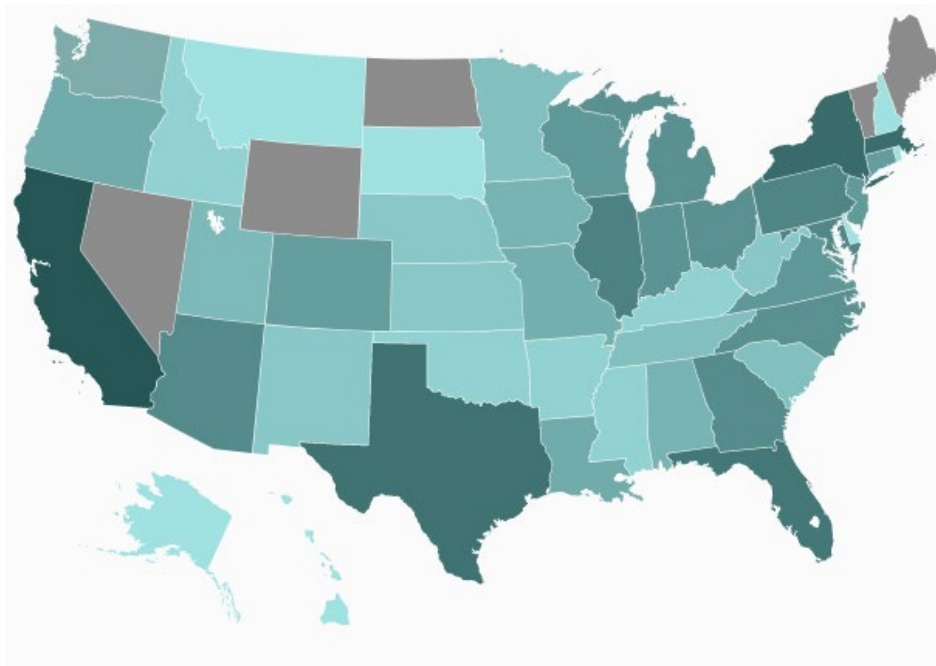
560 Grants Funded



OVERVIEW

In response to the COVID-19 virus, the National Science Foundation (NSF) is mobilizing funding from the FY2020 budget and supplemental appropriations through the Coronavirus Aid, Relief, and Economic Security (CARES) Act. CARES Act funding supports a wide range of research areas to help the country fight and recover from the COVID-19 crisis through several research funding mechanisms, including Rapid Response Research (RAPID), a fast-tracked grant process to accelerate critical discoveries.

AWARDS



COVID-19 related awards by state, shade of blue correlates to number of awards.

	CARES Act	All COVID-19
Number of Awards	406	560
Funding Deployed	\$59,823,492	\$79,542,584

This update spotlights several recent awards, just a snapshot of the essential work NSF is funding through the CARES Act and FY2020 appropriations. You can explore all of the COVID-19 related research grants awarded through the National Science Foundation at [this link](#).

DIVISION OF PHYSICS

CARES Act \$200,000

Title	RAPID: Mathematical Models for Understanding Key Epidemiological Parameters and Transmission of SARS-CoV-2
Institution	New Mexico Consortium; Los Alamos, NM
What	A coherent multiscale modeling framework will integrate data streams, generated on different biological scales, to provide greater understanding about the epidemiology parameters of the COVID-19 virus.
Why	Quantitative estimates of key epidemiological parameters like infection periods, correlation between duration and symptom severity, transmission and symptomatic characteristics, and viral load relative to infectiousness, are lacking. This integrative model could better facilitate prediction, evaluation, and intervention.

DIVISION OF ENVIRONMENTAL BIOLOGY

CARES Act \$197,375

Title	RAPID COVID-19 DCL response: Wastewater Pathogen Tracking Dashboard
Institution	Battelle Memorial Institute; Columbus, OH
What	Research suggests the COVID-19 virus is detectable in human waste and wastewater. A real time tracking system using wastewater data will detect and quantify viral concentration.
Why	This detection system can help deter second wave outbreaks by quantifying the amount of virus in city wastewater and identifying neighborhoods at highest risk of viral spread.

DIVISION OF CIVIL, MECHANICAL AND MANUFACTURING INNOVATION

CARES Act \$130,328

Title	RAPID: Adaptive Sampling Strategies for COVID-19 Mass Testing
Institution	University of Florida; Gainesville, FL
What	Researchers are combining numerous data streams in a framework designed to generate data-driven strategies to optimize COVID-19 testing. The project is capturing time-sensitive testing data and combining it with demographic data and mobility patterns to create a scalable approach to mass testing that can be adapted to different localities.
Why	This research will help public health officials more efficiently manage COVID-19 testing, which is especially important as states and localities begin transitioning away from limitations on social contact. This research aims to create a system for rapidly identifying potential “hot spots” and efficiently managing resources as the COVID-19 response focuses more on long-term testing approaches.

DIVISION OF INTEGRATIVE ORGANISMAL SYSTEMS

CARES Act \$199,999

Title	RAPID: Transcription Factor Profiling for SARS-CoV-2 Tolerance/Symbiosis Regulation
Institution	Boston University; Boston, MA
What	What molecular factors enable different species like bats and humans to tolerate viral infection? This research will explore molecular processes at play in species-specific cell infection for SARS-CoV-2.
Why	This research could provide insight on why and how some species can tolerate viruses that other species cannot, which could be useful for responding to the current pandemic and emerging viruses that have the potential to cause future pandemics.

DIVISION OF INTEGRATIVE ORGANISMAL SYSTEMS

CARES Act \$199,999

Title	RAPID: Longitudinal Study of Environmental Shedding of SARS-CoV-2
Institution	University of Nebraska Medical Center; Omaha, NE
What	This research is studying how the transmissibility of COVID-19 changes over the course of the illness. Researchers will measure various transmission factors at different points in the disease, with an emphasis on understanding how aerosol droplets (coughs and sneezes, for example) carry the virus.
Why	This research will help us fill in gaps in our understanding about the fundamental behavior of SARS-CoV-2, which causes COVID-19. We need to know how the virus is spread in the air during different stages of the disease to give medical professionals and public health officials the most complete information.

Related NSF Research News

- NSF Science Matters Blog: [Life on the ice during a pandemic: Keeping science in Antarctica going and the continent COVID-19-free](#)
- WHAM: [Grant helps URMIC researchers' math models predict how soon pandemic could end](#)
- HealthLeaders: [Coronavirus tests the value of artificial intelligence in medicine](#)