COVID-19 Funding Opportunities

Agency	Application Deadline	Funding Areas
Biomedical Advanced Research and Development Authority (BARDA)	June 30th	• Molecular Diagnostic Assay for SARS-CoV-2 virus on existing FDA-cleared platform • Point-of-Care Diagnostic Assay for detection of SARS-CoV-2 virus • Diagnostic Assay for detection of COVID-19 disease • COVID-19 Vaccine • Advanced Manufacturing Technologies More Information: https://drive.hhs.gov/partner.html#ncov
National Institutes of Health (NIH/POCTRN) - RADx	N/A	• Early stage SARS-CoV-2 Diagnostic Test: Transformative innovations based on novel testing strategies that have potential for major scale up • Advanced stage SARS-CoV-2 Diagnostic Test: Modification and optimization of existing SARS-CoV-2 testing approaches, including clinical laboratory tests, that can dramatically increase testing capacity • SARS-CoV-2 Diagnostic Innovations that improve analytical performance, enhance operational performance and improve access and reduce the cost of testing More Information: https://www.poctrn.org/radx
Department of Defense (DoD) – Newton Award	May 15th	Development of a "transformative idea" to resolve challenges, advance frontiers, and set new paradigms in areas of immense potential benefit to DoD and the nation at large. Proposals should aim to produce novel conceptual frameworks or theory-based approaches that present disruptive ways of thinking about fundamental scientific problems that have evaded resolution, propose new, paradigm-shifting scientific directions, and/or address fundamental and important questions that are argued to be undervalued by the scientific community More Information: https://www.grants.gov/web/grants/view-opportunity.html?oppId=326034

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Department of Defense (DoD)	April 30th	• P.O.C. diagnostic that provides rapid and accurate determination on exposure to COVID-19 • Prophylactic(s)/Therapeutic(s) that can prevent and/or treat in a rapid manner (few hours to 2 days) potentially in a non-hospital environment • Disease predictive modeling that provides early warning through data capture from several different streams of data to include social media and AI parameter decision tools that would provide actionable information to medical service providers and command structures • Patient monitoring, tracking, and management system for in-home or non-hospital environment patient tele-health services to include interface into the Cerner electronic health record More Information: https://beta.sam.gov/opp/53badf9fb02349e78839a541495efc6a/view
Department of Energy (DoE)	N/A	• Developing high-throughput multiplex technologies to characterize virus-host interactions, determine phage resistance mechanisms in nature, identify the degree of specificity for each bacterial resistance mechanisms across diverse phage types, and understand the coevolution of hosts and their phages, which can ultimately be used to design better phage therapeutic treatments and tools for precision microbiome engineering • Improved modeling for understanding natural viral populations and persistence in the environment, as well as predictive modeling for viral stability and evolution in changing environmental conditions • Understanding virus-microbiome community composition, function, and evolution • Synthetic biology of key target viral proteins to rapidly develop improved vaccines or therapeutics • Synthetic biology to construct viral genome variants and test viral stability, persistence, and resilience in the environment More Information: https://science.osti.gov/-/media/sc-1/pdf/COVID-19-letter.pdf?la=en&hash=2A142317F56F185FC3E2CEF0AEAD6CACB3E70C7F

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Medical Technology Enterprise Consortium (MTEC)	April 27th	• Technologies supporting the rapid development, deployment and testing of the National Emergency Telecritical Care Network (NETCCN) - a cloud- based, low-resource, stand-alone health information management system for the creation and coordination of flexible and extendable "virtual critical care wards." • Extension of high-quality intensive care to traditional (e.g. critical access hospitals and clinics) and non-traditional and temporary healthcare facilities (e.g. field hospitals and gymnasiums) which lack adequate critical care expertise and resources necessary for care of COVID-19-related illnesses • Healthcare organizations and technology vendors looking to rapidly, iteratively and collaboratively prototype, test and refine tele-critical care and data visualization solutions to support local, regional and ultimately national COVID-19 care and situational awareness More Information: https://www.mtec-sc.org/wp-content/uploads/2020/04/20-10-COVID-19_NETCCN.pdf
National Center for Advancing Translational Sciences (NCATS)	October 17th	Projects that repurpose existing drugs or biologics (existing therapeutics) to address COVID-19 that have already begun or completed a Phase I clinical trial More Information: https://grants.nih.gov/grants/guide/notice-files/NOT-TR-20-012.html
National Institutes of Health (NIH) - NIA Division of Aging Biology	May 1st	• Studies of the role of inflammation and immunesenescence in older populations with increased susceptibility to SARS-CoV-2 infection and subsequent progression to more severe disease, including lung pathology and acute respiratory distress syndrome (ARDS) • Development of aged animal models (including non-human primates) or in vitro models suitable for studies on pathogenesis of the virus and/or pre-clinical testing of therapeutics and vaccines against SARS-Cov-2 • Studies of how cellular and molecular mechanisms identified as pillars of aging impact the treatment, recovery, and repair of tissue and organ systems in older individuals infected with SARS-CoV-2. Studies of the identification of predictive biomarkers derived from clinical specimens and data collected from patients are also encouraged • Studies of how host factors, including existing co-morbidities such as respiratory, cardiac, and other conditions, predispose older individuals to acquire SARS-CoV-2 infections and/or develop more severe COVID-19 disease, such as ARDS More Information: https://grants.nih.gov/grants/guide/notice-files/NOT-AG-20-022.html

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National Institutes of Health (NIH) - NIA Division of Neuroscience	May 1st	• Studies of neurological and neurocognitive symptoms in COVID-19 and sequelae of SARS-CoV-2 infection related to the development or aggravation of such symptoms in older adults, e.g., delirium or early alterations in sensory function; studies of the susceptibility of people with Alzheimer's disease or Alzheimer's disease-related dementias (AD/ADRD) to COVID-19 • Studies of mechanisms of underlying SARS-CoV-2 neurological symptoms and pathology in older adults with COVID-19; research on the role of brain barriers in preventing SARS-CoV-2 from gaining access to the neural tissues and mechanisms through which SARS-CoV 2 compromises such barriers and propagates in the central nervous system (CNS); neuropathological studies of COVID-19 and the contribution of brain tissue damage by SARS-CoV-2 to the morbidity and mortality in COVID-19 in older adults • Studies aimed at discovery and development of novel drugs, as well as repurposing and repositioning existing drugs, for preventing and treating COVID-19, particularly drugs that are specific for COVID-19 related CNS targets and CNS mechanisms related to or driving the viral-mediated pathophysiology; studies on blood-brain-barrier penetrant drugs to treat potential SARS-CoV-2 reservoirs in the CNS • Development of computational and informatics methods, e.g., machine learning or artificial intelligence integrating with emerging multi-modal data for COVID-19 diagnosis, prevention, and treatment More Information: https://grants.nih.gov/grants/guide/notice-files/NOT-AG-20-022.html
National Institutes of Health (NIH) - NIA Division of Geriatrics and Clinical Gerontology	May 1st	• Relationships of individual factors, including co-existing conditions and medications, to resilient or adverse outcomes to SARS-CoV-2 exposure in older adults and comparisons with younger adults • Evaluation of pharmacological or health care delivery intervention strategies in older adults after exposure to SARS-CoV-2 to prevent or mitigate morbidity and/or improve post-infection health and function • Studies in pre-hospital, emergency, or critical care settings to improve screening, risk stratification, care delivery decisions, resource allocation, and clinical outcomes for older adults exposed to SARS-CoV-2. • Evaluation of strategies to minimize spread of COVID-19 among older adults and their care providers, particularly within facilities housing older adults, including telemedicine and remote medicine strategies More Information: https://grants.nih.gov/grants/guide/notice-files/NOT-AG-20-022.html

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National Institute of Allergy and Infectious Diseases (NIAID)	April 30th	• Research Area 003: Advanced Development of Vaccine Candidates for Biodefense and Emerging Infectious Diseases • Research Area 004 - Development of Therapeutic Products for Biodefense, Anti-Microbial Resistant (AMR) Infections and Emerging Infectious Diseases • Research Area 005 - Advanced Development of Diagnostics for Biothreats and Emerging Infectious Diseases More Information: https://beta.sam.gov/opp/8476add0be544073a56f97ec196608ba/view?index=opp&naics=541&page=6
National Institute of Allergy and Infectious Diseases (NIAID)	March 25th (2021)	• Studies to identify optimal in vitroculture requirements and conditions • Development of reagents and assays for virus characterization • Studies to understand critical aspects of viral infection, replication, pathogenesis, and transmission • Studies to identify viral epitopes critical for binding neutralization • Studies to examine virus stability and persistence • Production of molecular clones of SARS-CoV-2, reporter viruses and recombinant viral proteins • Development of animal models of SARS-CoV-2 infection suitable for screening vaccine and therapeutic candidates and/or pathogenesis studies • Studies on the evolution and emergence of SARS-CoV-2 viruses including the identification of factors that affect viral host-range and virulence • Virologic and serologic surveillance studies of the distribution and natural history of SARS-CoV-2 viruses in animal populations and in humans at the human/animal interface with particular emphasis on host reservoirs and understanding cross-species transmission events • Development of sensitive, specific, and rapid clinical diagnostic tests for SARS-CoV-2 • Development of SARS-COV-2 therapeutic candidates; broad-spectrum therapeutics against multiple coronavirus strains; examination of SARS-CoV-2 antiviral activity of existing or candidate therapeutics initially developed for other indications • Identification and evaluation of the innate, cellular and humoral immune responses to SARS-CoV-2 infection and/or candidate vaccines, including, but not limited to: cross-reactive antibodies from individuals exposed to SARS-CoV-2 and other coronaviruses; viral epitopes critical for antibody binding and neutralization; immune-mediated pathology or host factors that might predispose to severe infection • Development of SARS-CoV-2 vaccine candidates that include emerging antigen design strategies, novel platforms or delivery approaches, adjuvants, or assessing cross-neutralization potential of SARS-CoV vaccine candidates More Information: https://grants.nih.gov/grants/guide/notice-files/NOT-AI-20-034.html

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National Institute of Allergy and Infectious Diseases (NIAID)	April 5th (2021)	• Studies to identify optimal in vitro culture requirements and conditions • Development of reagents and assays for virus characterization • Studies to understand critical aspects of viral infection, replication, pathogenesis, and transmission • Studies to identify viral epitopes critical for binding neutralization • Studies to examine virus stability and persistence • Production of molecular clones of SARS-CoV-2, reporter viruses and recombinant viral proteins • Development of animal models of SARS-CoV-2 infection suitable for screening vaccine and therapeutic candidates and/or pathogenesis studies • Studies on the evolution and emergence of SARS-CoV-2 viruses including the identification of factors that affect viral host-range and virulence • Virologic and serologic surveillance studies of the distribution and natural history of SARS-CoV-2 viruses in animal populations and in humans at the human/animal interface with particular emphasis on host reservoirs and understanding cross-species transmission events • Development of sensitive, specific, and rapid clinical diagnostic tests for SARS-CoV-2 • Development of SARS-COV-2 therapeutic candidates; broad-spectrum therapeutics against multiple coronavirus strains; examination of SARS-CoV-2 antiviral activity of existing or candidate therapeutics initially developed for other indications • Identification and evaluation of the innate, cellular and humoral immune responses to SARS-CoV-2 infection and/or candidate vaccines, including, but not limited to: cross-reactive antibodies from individuals exposed to SARS-CoV-2 and other coronaviruses; viral epitopes critical for antibody binding and neutralization; immune-mediated pathology or host factors that might predispose to severe infection • Development of SARS-CoV-2 vaccine candidates that include emerging antigen design strategies, novel platforms or delivery approaches, adjuvants, or assessing cross-neutralization potential of SARS-CoV vaccine candidates More Information: https://grants.nih.gov/grants/guide/notice-files/NOT-AI-20-031.html
National Institute of General Medical Sciences (NIGMS)	June 6th (2021)	• Incorporation of data related to SARS-CoV-2 into ongoing research efforts to develop predictive models for the spread of SARS-CoV-2 and other related infectious agents (all relevant grants) • Repurposing or modification of diagnostic tools currently under development to enable rapid detection of SARS-CoV-2 infection (SBIR/STTR grants only) • Rapid development of potential therapeutic agents for COVID-19 (SBIR/STTR only) More Information: https://grants.nih.gov/grants/guide/notice-files/NOT-GM-20-025.html

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National Institute of Allergy and Infectious Diseases	June 29th	**Therapeutics** • Lead optimization; medicinal chemistry; structure/activity relationships • Synthesizing, purifying, and testing lead candidates for efficacy and toxicity in in vitro assays and preclinical in vivo model systems • Performing preliminary pharmacokinetic (PK) and pharmacodynamics (PD) analyses on lead candidates • Preclinical testing for efficacy and safety in animals • Testing and validation of efficacy in in vitro or in vivo models (e.g., rodents, nonhuman primates) • Optimization of dose, dosing interval, and route of delivery in preclinical evaluation or in animal models • Methods to modify existing drugs/therapeutics to improve economy of production, half-life in vivo, target affinity, neutralization potency, microbial clearance rates, or tissue accessibility; or to decrease adverse side effects of administration • Evaluation of the potential for the emergence of drug/therapeutic resistance in model systems • Assessing bioavailability and mechanism of action • Process development for the manufacturing of a therapeutic, including QA/QC, methods for product recovery, characterization, purification, identity, stability etc. • GLP or cGMP production to generate sufficient product to conduct pre-clinical and for future Phase I clinical studies • Performing required benchmarks for successful submission and review of an IND application by the FDA **Vaccines** • Lead vaccine candidate optimization • Evaluation of safety, toxicity and immunogenicity in animals • Evaluation of efficacy in challenge models where appropriate animal models are available • Optimization of dose and route of delivery in preclinical evaluation • Optimization of production methodology including process development • Scale up and production of candidate vaccines including cGMP production • Process development for the production of vaccine components, including Quality Assurance (QA)/Quality Control (QC), methods for product recovery, characterization, purification, identity, stability, etc. • Manufacturing under GLP or cGMP to provide quantities sufficient for preclinical and early clinical evaluation • Performing preclinical testing for safety, toxicity, and efficacy in animal models and other benchmarks required for successful submission and review of an Investigational New Drug (IND) application by the Food and Drug Administration (FDA) • Optimization of delivery platforms, antigen and adjuvant combinations/formulations • Advanced development of non-needle vaccine delivery systems, such as transdermal, oral, or nasal delivery • Advanced development of formulation methodologies that obviate the need for cold-storage of the resulting product and/or extend shelf-life More Information: https://grants.nih.gov/grants/guide/rfa-files/RFA-AI-20-028.html

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National Institutes of Health (NIH)	March 31st (2021)	• Research to determine whether substance use (especially smoking tobacco or marijuana, vaping, opioids and other drug use) is a risk factor for the onset and progression of COVID-19
		• Research on how HIV among persons who use substances may impact the onset and progression of COVID-19
		• Research to understand system-level responses to COVID-19 prevention and risk mitigation in secure settings such as prisons and jails, with a particular emphasis on detainees with substance use disorder (SUD). For example:
		  o Interactions of COVID-19 treatment with SUD treatments, including medications for opioid use disorders
		  o Strategies for integrating COVID-19 and other infectious disease screening, prevention, and treatment protocols with SUD treatment and other health services
		• Research to understand the respiratory effects of SARS-CoV-2 infection among individuals with substance use disorders (SUD); in particular those with nicotine, marijuana, opioid, and methamphetamine use disorders
		• Research to understand how the respiratory effects of COVID-19 influences the rate of opioid overdoses both in pain patients as well as patients with an opioid use disorders and also to assess how it influences the outcomes for naloxone interventions for overdose reversal
		• Research to develop therapeutic approaches for comorbid SARS-CoV-2 infection and SUDs
		• Research to evaluate drug-drug interaction of medications to treat SARS-CoV-2 and substances of abuse or medications to treat SUDs
		• Research to understand system- or organizational-level responses to identify, prevent, or mitigate the impact of COVID-19 in service settings that serve vulnerable populations, including people who are homeless or unstably housed
		• Research to understand and mitigate the impact of COVID-19 in methadone treatment programs and syringe exchange services
		• Research on how potential overcrowding of emergency departments and health services will impact the treatment of opioid overdoses and of opioid use disorder
		• Research using ongoing studies to understand the broad impacts of COVID-19 (e.g., school closures, food insecurity, anxiety, social isolation, family loss) on neurodevelopment, substance use, substance use disorders, and access to addiction treatment
		
		More Information:
		https://grants.nih.gov/grants/guide/notice-files/NOT-DA-20-047.html

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National Institutes of Health (NIH)	October 6th	• Host factors, including the microbiome or existing cardiac, respiratory, or hematologic conditions, that predispose persons to acquire SARS-CoV-2 or to develop severe COVID-19 disease, or that confer resistance to severe disease as in infants and young children • Manifestations, complications, and long-term consequences of SARS-CoV-2 infection, including identification of predictive biomarkers derived from imaging, clinical data, and biospecimens collected across organ systems • Time course and features of virus-host interactions, including the impact of SARS-CoV-2 infection on innate and adaptive immune responses • Prevalence and mechanisms of lung and cardiac injury with SARS-CoV-2 infection • Host factors and biological pathways that impact recovery and repair of the cardiopulmonary and vascular systems after SARS-CoV-2 infection • Development of animal or in vitro models of SARS-CoV-2 infection suitable for pathogenesis and therapeutic studies or transfusion transmission experiments such as, but not limited to, macaque and ACE-2 receptor murine models • Use of artificial intelligence or machine learning approaches to understand the biological pathways of COVID-19 disease, its comorbidities, and potential prevention strategies • Prevalence of RNAemia in symptomatic and asymptomatic people found to test positive for SARS-CoV-2 using respiratory tract samples • Dynamics of SARS-CoV-2 viremia and antibody response, and implications on screening and diagnostic assay development • Development of GMP quality hyper immune globulin from convalescent plasma collected from patients who have recovered from documented SARS-CoV-2 infection • Development and testing of strategies at the healthcare system level to address barriers and facilitators in the treatment of high-risk populations, particularly rural residents and underserved individuals More Information: https://grants.nih.gov/grants/guide/notice-files/NOT-HL-20-757.html
National Science Foundation (NSF)	N/A	Proposals to conduct non-medical, non-clinical-care research that can be used immediately to explore how to model and understand the spread of COVID-19, to inform and educate about the science of virus transmission and prevention, and to encourage the development of processes and actions to address this global challenge More Information: https://www.nsf.gov/pubs/2020/nsf20052/nsf20052.pdf

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Bill and Melinda Gates Foundation	TBA	• Development of molecular diagnostics to detect cases for treatment and isolation of COVID-19
		• Development of point-of-care diagnostics for COVID-19
		• Identification of potential vaccine and monoclonal antibodies that are:
		    ○ High efficacy for community protection
		    ○ Safe in humans
		    ○ Active against COVID-19
		    ○ Quickly manufactured in hundreds of millions of doses
		    ○ Deliverable in low-resource setting
		
		More Information:
		https://www.gatesfoundation.org/TheOptimist/Articles/coronavirus-mark-suzman-therapeutics