

Applicant Organization	Grant Type (Vaccine/Treatment/Therapy)	Total Funding Requested	Project Description
Apogee Biotechnology Corporation	Treatment	\$306,250	Apogee Biotechnology Corporation has developed the new drug opaganib. They have a unique opportunity for leveraging previous studies and investment in opaganib to rapidly provide a new drug for the treatment of COVID-19.
Aptagen	Therapy	\$320,000	Aptagen proposes to produce high-affinity aptamers targeting the SARS-CoV-2 spike protein antigens to prevent the virus from entering cells, thus mitigating the infection.
Baruch S. Blumberg Institute	Treatment	\$165,406	This proposal offers the opportunity to progress a compound toward clinical trials using a traditional drug discovery pathway including testing the compound in tissue culture, developing a structure-activity relationship (SAR), synthesizing novel compounds, and evaluating the pharmacokinetic properties of this drug series.
Baruch S. Blumberg Institute	Treatment	\$207,900	Baruch S. Blumberg will conduct a study to determine if a small molecule iminosugar, alone or in combination with Remdesivir or Favipiravir, has useful antiviral activity against SARS-CoV-2, the cause of COVID-19.
Bucks County Biotechnology Center	Other/Build Out of Space	\$430,000	Bucks County Biotechnology Center will convert an under-used "warehouse" grade space in its Pennsylvania Biotechnology Center (PABC) complex into useful research and training space that will accelerate the pace of development of projects dealing with COVID-19 and related work. The 6,000-square-foot space will be used by several biotechnology companies, research projects and trainees who will work on new therapeutics and diagnostics discovery science, as well as human phlebotomy for COVID-19.
Carnegie Mellon University	Vaccine	\$643,359	Carnegie Mellon University will accelerate its vaccination efforts against COVID-19 by developing a novel, safe, efficient, reliable, inexpensive, and pain-free vaccination strategy. This strategy is based on novel <i>Hybrid-Microneedle Arrays</i> (Hybrid-MNA) to deliver COVID-19 vaccines directly to the skin, which enables using a very small dose (potentially 1/100th the regular dose) to elicit strong and long-lasting immunity against SARS-CoV-2 infections towards significantly reducing the expected vaccine shortages.
Chimeron Bio Corporation	Vaccine	\$600,000	Chimeron Bio will accelerate the testing and development of its unique self-amplifying RNA technology, called ChaESAR™ originally developed at and licensed from the National Institutes of Health, to serve as an effective and affordable vaccine.
Drexel University College of Medicine	Vaccine	\$1,000,000	Drexel University has proposed the development of a COVID vaccine immunoadjuvant system that improves vaccine durability and quality of SARS-CoV-2 protective antibody for at-risk individuals, including the elderly.
Evrys Bio, LLC	Treatment	\$321,912	Evrys Bio is developing host-targeted antiviral drugs (HTAs) that can block the growth of different respiratory viruses including coronaviruses, and that can provide a high barrier to drug resistance.
Integral Molecular, Inc.	Therapy	\$521,723	Integral Molecular will create a therapeutic MAb that is broadly-cross reactive – against SARS-CoV-2 in its current form, but also against additional variants of coronavirus that continue to emerge so that new variants that emerge due to first-generation therapeutics can be treated and so resistant variants do not emerge as a result of the therapeutic. This project is designed to respond to the threat of COVID-19 today, as well as to new coronaviruses that may emerge tomorrow.
Magee-Womens Research Institute and Foundation	Treatment	\$568,131	Magee Women's Research Institute and Foundation will develop a nasal spray to prevent coronavirus infection, and hypothesizes that prophylactic use of antivirals against SARS-CoV-2 via a nasal spray can lead to virus inactivation at the sites of viral entry and replication.
Melior Pharmaceuticals I, Inc.	Therapy	\$212,600	Melior Pharmaceuticals I has repositioned an existing therapeutic that shows great promise as a pulmonary therapeutic and which is expected to reduce the occurrence and severity of pulmonary complications in subjects with COVID-19.
Ossianix	Vaccine	\$420,000	Ossianix is taking an immunological approach to developing a vaccine. Antibodies that target and neutralize the virus are particularly important for older patients who may have a weakened immune response.
Penn State College of Medicine	Vaccine	\$415,720	Penn State College of Medicine will use non-infectious SARS-CoV-2 VLPs to produce a stable vaccine candidate that will elicit strong neutralizing antibodies to S proteins and simultaneously activate long term protective T-cell immunity to SARS-CoV-2.
Respana Therapeutics, Inc.	Therapy	\$60,000	Respana's goal is to develop a universal, injectable, monoclonal antibody product that is widely available in clinical settings and stockpiled by healthcare authorities for use in pandemic situations like the current one.

The Wistar Institute	Vaccine	\$300,000	The Wistar's Institute goal is to develop a vaccine to SARS-CoV-2 that induces both neutralizing antibodies directed against the S protein and robust T cell responses to the nucleocapsid phosphoprotein (N).
Thomas Jefferson University	Vaccine	\$508,480	The lab at Thomas Jefferson University has developed a novel, highly efficacious and safe COVID-19 vaccine with facile scale up potentials.
University of Pennsylvania	Vaccine	\$823,192	This proposal for state funding is designed to accelerate the progress of two novel strategies for combating the COVID-09 pandemic. Both of these strategies leverage decades of experience with the successful development of plant-based protein therapies to develop targeted oral therapeutics and vaccination strategies.
University of Pennsylvania	Therapy	\$52,756	The University of Pennsylvania aims to perform a sub-study of COVID NOCHE, a randomized, crossover trial comparing helmet CPAP versus HFNO at the University of Pennsylvania Health System and assess the physiologic response of obese patients to non-invasive therapies. They also aim to employ a novel imaging technique to individually titrate device settings to maximize lung aeration and limit atelectasis. This proposal will provide immediate information to improve clinical practice and generate evidence for the design of future large-scale trials in obese patients with COVID-19 AHRF.
University of Pittsburgh	Vaccine	\$633,769	The University of Pittsburgh's goal is to develop a safe, costeffective, patient-friendly, and broadly-deployable skin-targeted mRNA vaccine for efficacious global immunization against COVID19. They propose to leverage their unique expertise in the clinical development of microneedle array (MNA)-based prophylactic approaches and the (HelixNano) comprehensive experience with the synthetic biology of translational mRNA platforms to manufacture a clinical-grade MNA-SARS-CoV-2 mRNA vaccine using biofabrication processes adherent to regulatory requirements.
University of Pittsburgh-Center for Vaccine Research	Vaccine	\$976,922	The Center for Vaccine Research (CVR) at The University of Pittsburgh aims to increase the capabilities of CVR for vaccine development and related research activities (development of new tests, therapies, and disease models). A central focus of this project is accelerated development of the University of Pittsburgh patented candidate COVID-19 vaccine.
US Specialty Formulations LLC (in partnership with VaxForm LLC)	Vaccine	\$211,880	The US Specialty Formulations LLC (USSF) USSF will enhance equipment and infrastructure for its recently purchased Allentown facility, and thus significantly accelerate its manufacturing ramp of the oral COVID vaccine. The vaccine platform USSF is moving into clinical evaluation has been in development for non-COVID vaccines over the previous 6 years. This technology has been proven and is now ready for process optimization and scaleup. USSF is working towards conducting Phase 1 trials by January 2021 and emergency use authorization of the oral vaccine by April 2021.
VaxForm LLC (in partnership with USSF)	Vaccine	\$300,000	VaxForm is developing an orally administered protein subunit vaccine targeting the receptor binding domain of the spike protein of the SARS-CoV-2 virus. The first-generation of this vaccine was produced as a liquid suspension and is in the process of transferring to US Specialty Formulation for clinical production. VaxForm has initiated development of a second-generation of the vaccine which would produce the vaccine as a powder allowing manufacture into capsules or tablets.

Grant Type		Total Proposals
Vaccine:	\$6,833,322	12
Therapy:	\$1,167,079	5
Treatment:	\$1,569,599	5
Other:	\$430,000	1
<b>Total:</b>	<b>\$10,000,000</b>	<b>23</b>