

COVID-19 Research Grant Program

COVID-19 RGP Secretariat
KACST | RIYADH

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Introduction to the COVID-19 Research Grant Program

About the Program

Coronaviruses are a large family of viruses that are common in people and many different species of animals, including camels, cattle, cats, and bats. Rarely, animal coronaviruses can infect people and then spread between people such as with MERS-CoV, SARS-CoV, and now with this new virus (named SARS-CoV-2).

The SARS-CoV-2 virus is a betacoronavirus, like MERS-CoV and SARS-CoV. All three of these viruses have their origins in bats. Early on, many of the patients at the epicenter of the outbreak in Wuhan, Hubei Province, China had some link to a large seafood and live animal market, suggesting animal-to-person spread. Later, a growing number of patients reportedly did not have exposure to animal markets, indicating person-to-person spread. Common symptoms include fever, cough and shortness of breath. muscle pain, sputum production and sore throat are less common symptoms. While the majority of cases result in mild symptoms, some progress to pneumonia and multi-organ failure. Using WHO data on the cumulative number of deaths to March 1, 2020, mortality rates would be 5-6% (95% CI 5-4–5-8) for China and 15-2% (12-5–17-9) outside of China.

Recognizing the urgent need to develop **diagnostic tests and monitoring/surveillance systems**, increased efforts will concentrate on enabling front-line health workers to perform diagnostic screening more quickly and more accurately. This will contribute towards early detection and reducing the risk of further spread of the virus.

The leadership of Saudi Arabia's health and research institutions have collectively initiated a highly-visible and expedited research funding initiative, COVID-19 Research Grant Program "the Program. This call aims to strengthen the evidence base to better prevent and control coronavirus (COVID-19) epidemics and to increase research and response capacity. It is a collaborative program that enables Saudi Arabia's academic and health research community to raise a concentrated effort against COVID-19.

Scope of funding

- Development of rapid point-of-care diagnostic tests.
- Development and in-house production of COVID-19 multiplexed qPCR diagnostic assays.
- Development of COVID-19 immune-serological assays.
- Molecular epidemiology and surveillance.
- Mathematical modeling of COVID-19 and infection dynamics.

Areas we don't cover

We will not consider proposals that address vaccine development.

Program's Strategic Objectives

COVID-19 Research Grant Program (COVID-19 RGP) is a concerted effort of the Saudi Arabian government to expand the knowledge base in, and prepare the country to address the challenge of the COVID-19 Coronavirus. For rapid epidemic preparedness and response, we need to develop a platform that is readily modified according to a novel pathogen.

The Program has the following strategic objectives:

- Development of new and rapid methods for diagnostic, and rapid and early detection and monitoring,
- Increase research output to support the Saudi knowledge base in COVID-19,
- Stimulate high quality research through strict program monitoring and evaluation,
- the natural history of the virus, its transmission and diagnosis,
- animal and environmental research on the origin of the virus, including management measures at the human-animal interface, and
- Engage Saudi researchers and enhance their productivity through appropriate research networks and critical infrastructure.

Program Governance

The Program is a collaborative endeavor of three of the key national stakeholders dealing with the COVID-19 challenge:

- Saudi Health Council Representatives (Waqaya, MOH, Center for Health and Research Study)
- Research centers and universities, and
- King Abdulaziz City for Science and Technology (KACST)

As such, the Program is governed by an Oversight Committee drawn from the leadership of the aforesaid agencies with the following charges:

- Identifying Research Priorities
- Establishing reliable governance model for ensuring data and biological sample accessibility for all approved projects
- Providing strategic directions for the program to achieve its objectives in timely manner

The Program's Secretariat, responsible for smooth coordination and Program execution, resides within KACST.

This investment will support up to 10 research teams from across the kingdom that will focus on accelerating the development, testing, and implementation of measures to deal with the COVID-19 outbreak.

R&D Focus

- Early detection and diagnosis of COVID-19 infection.

Scope of the Program

The Program is requested for proposals. Approved projects are encouraged to be executed over a period of up to a year. The intent is to execute projects with specific, measurable, and immediate impacts so as to urgently address the increasing threats of COVID-19, as described in "Program's Strategic Objectives" section

As stated above, the Program funds for requested proposals through research grants. To ensure funding of proposals of the highest quality and impact, the Program has set in place a highly selective process that includes an unbiased review of research proposals by a panel of leading experts in the field. The Program also adopts global best practices in research program management to ensure researchers deliver the

intended results on time and within budget. More information on the grants proposal application and review process is provided in the latter part of this document.

The Program does not conduct research within its own administrative mandate, and therefore does not own physical assets such as labs and equipment. Rather, it acts as an enabler of research conducted by researchers at their own host institutions.

Eligibility for Funding

Core Requirements

Successful proposals must meet standards of research excellence, human and social capital development, and field relevance. International experience has shown all three areas to be critical to success of a mission-oriented research grants proposal.

The combination of research excellence and focus on relevant problems not only builds trust, it also builds the human and social capital so highly valued by companies that translate research results into diagnostic platforms and medical devices, and usable processes. This goes beyond skills to conduct research, and it includes knowledge of the processes of technological innovation, skills in planning and managing applied R&D, identifying and fostering potentially commercialize ideas, and managing intellectual property.

Proposals must demonstrate clearly the current understanding of the issues at hand, and must clearly articulate approaches to solve unsolved problems with adequate emphasis on management of research activities, IP and innovation leading to appropriate solutions.

Participant Requirements

The Program envisages supporting high quality research proposals submitted by individual Principal Investigators from academic institutions and health research organizations. Therefore, leading researchers from the Kingdom's universities are encouraged to apply for funding as mentioned in Section "Program Governance".

Essential Activities

Proposals must focus on the following activities:

- Short-term, goal-oriented research with specific objectives;
- Information and knowledge exchange activities including sharing of research results at conferences, seminars, and workshops;
- Activities to deploy research outputs and encourage adoption by pharma industry and health service organizations directly through licensing, consulting, or via spin-off companies;
- Strategic planning to achieve integration of research, education, outreach, and technology transfer and implement it in ways that engage faculty, students, and industry researchers and managers, and public health agencies.

Funding Level and Use of Funds

Scale of Funding per Proposal

The Program budget is up to 500,000 SR requested by each principal investigator (PI) must be fully justifiable.

The Program assumes that proposals will leverage existing infrastructure and investments in their host institutions; therefore, the intent is not to fund establishment of large labs or facilities. PIs are requested to exercise good judgment to reduce use of Program funds to build infrastructure.

Use of Funds

Funding received from the Program may be used for the following categories:

- Salary and incentives – broken down by specific categories – undergraduates, graduates, post graduate scholars, faculty, permanent staff, visitors, and consultants;
- Equipment to be purchased, including maintenance fees and upgrades;
- Software to be purchased, including maintenance fees and upgrades;
- Materials and supplies;
- Travel – domestic and international in separate categories;
- Conference hosting and executive education courses;
- Fees related to management of intellectual property
- Legal and other professional services including consultant fees;
- Publication fees
- Support services;
- Other categories.

While the above expense categories are used to provide PIs with high-level guidance, the Program does not set limits or stringent criteria on how the funding can be best applied to achieve its goals. Rather the Program offers the PIs reasonable degrees of freedom in constructing high impact proposals. To ensure high impact within short periods, ready to execute proposals will be given highest priority.

PIs may have the flexibility in selecting the best possible mix of faculty, post-doctoral and graduate student researchers. PIs may have the flexibility of selecting industrial and international experts to bring the maximum value to the Program and meet its goals

Extension or Renewal of Funding

The Program offers flexibility in terms of renewal of grants and extension of research projects. However, requests for renewal or extension must be justifiable and will be subject to both technical and management review. Only in cases where a renewal or extension may be deemed to further Program's goals, such requests may be approved.

Program Management

Organization Structure

As stated earlier, the Program is governed by an Oversight Committee drawn from the leadership of key stakeholder organizations. The Oversight Committee sets the overall strategy and direction of the Program. Program execution is managed by the Program Secretariat which resides in KACST. The Program Secretariat provides the administrative support required for proposal solicitation and grant award management.

A Scientific Review Panel serves as the interface between the PIs and the Program Secretariat. The Panel establishes guidelines for research proposals, prescreens those for technical review by external reviewers and produces summary reports on the review process. During the prescreening process, the Technical Review Panel ensures that all required information is furnished by the PIs and that the proposals selected compatible with the strategic objectives of the Program.

The program lays emphasis on tangible research outcomes within a reasonable period through effective research management practices. Therefore, quality assurance and performance management are key aspects of the Program. During the execution of the projects, the Quality Assurance and Monitoring Committee will liaise with the PIs to collect and compile necessary data and information on research teams, activities, and outputs. This committee will set key performance indicators (KPIs) and facilitate reporting for each project and review of progress on behalf of the Program Secretariat. Based on periodic reviews, the committee will make recommendations to continue funding for the project.

Role of Host Institutions

The Program offers significant freedom and flexibility to PIs to articulate the research proposal, form their research teams, execute projects and compensate researchers who contribute effectively. However, the Program reckons that the PIs are affiliated with academic institutions that have their own policies and procedures with regard to research project management. The Program encourages the PIs to strictly follow their respective host institution's policies and execute the projects in harmony with their affiliations. The host institutions must officially endorse the applications of PIs for the application to be eligible for review.

Application Forms and Submission Process

The Program solicits applications in a predesigned format to facilitate comparable, consistent and expedited review. Forms designed by the Local Technical Review Panel and made available to the invited applicants through the Program's website (<https://grants.kacst.edu.sa/>) must be filled completely and precisely. Failing to complete the application and supplementary forms may lead to rejection of the submission.

Applicants must read and understand guidelines for each section of the application form before completing the full application.

All application forms must be submitted no later than the 15th of April 2020.

Review process

The COVID 19 Research Grant Program adheres to global best practice in research program management to ensure utmost degrees of objectivity and quality. A qualified Scientific Advisory Board appointed by the Oversight Committee will monitor, guide and facilitate the entire grant review process. Throughout this process, the COVID-19 RGP personnel and selected reviewers will adhere to all conflict-of-interest and confidentiality requirements.

In keeping with best practices, the Program has adopted a two-step process for application review.

- First, an initial review of every application will be conducted upon receipt of the grant application forms to ensure that the proposal meets all requirements stipulated in the call for proposals. The Local Technical Review Panel will interact with PIs as needed to solicit any missing information.
- Second, complete grant applications that meet programmatic priorities and budget constraints are, subsequently, evaluated in terms of scientific and technical merits. This step is conducted by at least three reviewers. Scientific Advisory Board of the program will assign reviewers to each application based on relevant scientific expertise and/or research experience. Following the receipt of the reviewer's feedback, a summary statement report for each application is prepared which include reviewers' written critiques, recommendations, and an average final score. The summary statement is forwarded to the secretariat of the oversight committee and funding recommendations of highly scored applications will be approved. A notice of approval or rejection will be sent to the applicant once the review process is complete.

Award Process

With the notice of award, the process of project award sets in. The Program Secretariat will communicate with the PIs for necessary documentation. While the Program will follow KACST grant management infrastructure in general, the Program Secretariat will proactively interface with the relevant departments within KACST to ensure awarded projects are initiated quickly. The Oversight Committee may, at their discretion, invite all winning teams to a Grant Signing event to initiate cross-project communication.

Program Monitoring and Evaluation

The COVID-19 RGP takes a balanced and systematic approach to monitoring and program evaluation. The Program Secretariat, in consultation with the Quality Assurance and Monitoring Committee, sets forth periodic reviews to ensure all funded project move toward timely completion with results. Technical and financial reports are expected to be submitted by the PIs in consistent format. The PIs of the winning proposals will be provided with the data collection forms and report templates upon grant award.

Reports

The Program will deploy two key tools for program monitoring and evaluation:

1. **Quarterly Review:** To enable oversight across the Program, while at the same time, to minimize burden on the PIs, quarterly reviews will be conducted by the Program Secretariat using simple forms and report templates.
2. **Final Project Report:** PIs will submit a final report for each project within 30 days of project completion. The Final Report will comprise a technical section and a management and financial section. The final report will clearly articulate the research results. The report will be prescreened by the Scientific Committee before being reviewed by the Quality Assurance and Monitoring Committee. At their discretion, the committee may have external reviewers review final technical reports.

Key Performance Indicators

A set of project performance indicators will be regularly tracked and reported by the Program. For the Program-level indicators to be meaningful and usable, it is critical to have project-level data reported by PIs in the quarterly review and in the final project reports.

Performance indicators reported to the Oversight Committee will include a select set of indicators on each of the three major categories: 1) inputs to the project; 2) activities related to the project, and 3) outputs of the project.

References

1. WHO

Coronavirus disease 2019 (COVID-19).

<https://www.who.int/health-topics/coronavirus>

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2. CDC

Coronavirus disease 2019 (COVID-19).

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

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