



## RAPID Research and Innovation Initiative

### Call for Proposals Guidance

**Deadline for Full Proposal Submission: April 3, 2020, 5 pm Pakistan Time**

#### I. General Information

##### A. Program Description:

The RAPID Research and Innovation Initiative (RRII) invites researchers to use the RAPID Research and Innovation funding mechanism, which allows HEC to receive and review proposals dealing with topics and issues of severe urgency with regard to availability of or access to data, facilities or specialized equipment as well as quick-response research on COVID-19. The said fund is supported by the World Bank and implemented by the Higher Education Commission (HEC). The RRIF will provide funds to selected institutions based upon a competitive, yet swift peer-review of proposals.

The priority themes for RRII support include:

- **Development of Infectious Diseases Surveillance Systems using big data analytics and artificial intelligence:** Including integrating the response into the entire medical system, from primary to secondary to tertiary
- **Disease Epidemiological Modelling:** Data systems and evidence-informed modelling for disease prediction, outcome prediction and impact assessment of interventions
- **Immune Patterns of COVID-19:** Immune Mechanisms of COVID-19 infections and recovery, implications for diagnostics and therapeutics, including understanding localized factors and responses (such as ethnic, genetic, social, behavioral, and climatic factors, etc.)
- **Treatment modalities and strategies** including concentration on local and traditional medicine
- **Diagnostics kits:** Rapid diagnostics based on antigen detection vide RTPCR systems, Gene EXPERT systems or alternatives
- **Indigenous manufacture of Low cost Intensive-care equipment:** Oxygen supply and monitoring equipment, Intravenous fluid devices, Ventilators/CPAP units, Cardio-respiratory monitors etc.

- **Development of disinfectants particularly using indigenous herbal ingredients:** low-cost sterilization and sanitation material for hospitals, general-purpose consumer hand sanitization material
- **Personal Protective Equipment:** N-95 Masks, other Personal Protective Gear (clothing gowns, goggles and gloves), preferably reusable materials
- **Information Collection and Dissemination IT platforms:** Identify hotspots and growth patterns, Contact tracing modelling of affected people

Each applicant seeking funding through the RAPID Research and Innovation Initiative can propose an idea based on **one** of the above-mentioned priority themes and can apply through **one** of the following three funding instruments:

### 1. RAPID Research Grant

The RAPID Research Grant will support multidimensional research projects of strategic importance related to the above-mentioned priority themes. Projects should include relevant and cutting-edge research activities and should ensure WHO alignment. Research conducted in RRG projects must address specific challenges associated with the targeted priority theme and must clearly demonstrate a solution or significant progress in addressing a grand challenge.

Budgets for RRG awards will be up to a maximum of Rs. 15 million (USD 100 000), with a maximum project duration of 12 months. Principal Investigators are encouraged to seek co- and complementary financing from other sources.

RRG funding may be used for:

- **Salaries** for PI and co-PIs based on the amount of time spent on the project
- **Stipends** for bachelors, masters, doctoral students, and postdoctoral scholars to conduct the research proposed
- **The purchase and maintenance** of appropriate, approved equipment to conduct the research proposed
- **The purchase of research supplies** necessary to conduct the research proposed
- **Limited research and development costs**
- **Patent filing**
- **Grants to attract visiting researchers** from outside Pakistan to conduct research that contributes to the grant objectives. These visiting researchers can be either expatriate Pakistani scientists or foreign scientists.

Rapid Research Grant Proposals must be designed to include milestones and key performance indicators that should (ideally) begin providing valuable information and advice right from the start of the project and not wait for all the results at the tail end of the proposed project. To the extent possible, project must also be designed in a manner that research teams can begin working right away rather than waiting for lengthy procurement or hiring. Those projects that have a steady stream of high value immediate outputs and outcomes will be preferred. The Program Steering Committee may review progress on a bi-monthly or quarterly basis.

A component of the grant will be earmarked for the **problem solving** (i.e., it will be released only if there is a demonstrable evidence of success in solving the chosen problem).

## 2. RAPID Technology Transfer Grant

The RAPID Technology Transfer Grant (RTTG) seeks to support university industry technology transfer of a previously developed an existing prototype or an advanced model (or equivalent). Owing to the nature of the COVID-19 crisis, the RTTG shall be ideally utilized to quickly transition science or technology to an actual industrial partner (or partners) that will result in significant and qualitative improvement in the latter's capacity to meet the emerging challenge of COVID-19.

Budgets for RTTG awards will be up to a maximum of Rs. 7.5 million (USD 50 000) with a maximum project duration of 6 months. Principal Investigators are encouraged to obtain co-financing – including in-kind and/or cash contributions – from the industry collaborators. The requested amount of RTTG funding for the academic institution can exceed the co-financing committed by the industry collaborators.

The RTTG Proposals must be designed to include milestones and key performance indicators that should (ideally) begin delivering an impact right from the start of the project and not wait for all the results at the tail end of the proposed project. Those projects that have a steady stream of high value immediate outputs and outcomes will be preferred. The Project Steering Committee may review progress on a bi-monthly or quarterly basis.

RTTG funding may be used for:

- **Salaries** for PI and co-PIs based on the amount of time spent on the project
- **Stipends** for bachelors, masters, doctoral students and post-doctoral scholars to help take the prototype or proposed product to market.
- **Limited prototype development costs**
- **Laboratory tests or access to data**
- **Patent filing**
- **Producing licensing agreements**
- **Legal and financial investment advice**
- **Marketing of the prototype** or proposed product to appropriate investors or stakeholders.

## 3. RAPID Innovation Seed Fund

The RAPID Innovation Seed Fund (RISF) will be implemented through the existing BICs located at HEIs. Within the RISF competition, the Higher Education Commission aims to support a portfolio of entrepreneurial teams that, as a whole, will lead to successful start-ups addressing the COVID-19 national response.

An additional priority area for RISF is Education Technology to facilitate learning at the basic and secondary education levels in a COVID-19 environment

The budgets for RISF projects will be Rs. 5 million (USD 35,000) for a period of 6 months. The project budget will finance the following activities:

- a. Working capital or initial order costs
- b. Certification, registration or endorsement
- c. Laboratory testing
- d. Marketing costs or arranging demonstration
- e. Funds to scale the venture
- f. Financial management, or other (please specify)

## **B. Applicant Eligibility**

### **RAPID Research Grant:**

Lead Principal Investigators (PIs) must:

- Be university faculty member (PhD or FCPS/MCPS/FRCS) from medical institute or research-intensive institution as specified for GCF-2020 call (The VC/Rector shall ensure that **max. two exceptional proposals per HEI will be submitted**)

Project Team may include:

- A consortia of faculty members from multiple university departments and/or multiple universities
- Private sector participants, particularly when they bring prior IP or capability to the consortium and/or significant deployment, implementation, or scale up capability
- International partners

International collaborations are encouraged:

- When the international partner brings a unique added value to the project team

### **RAPID Technology Transfer Grant**

Principal Investigator (PI) must:

- be a regular faculty member (PhD or FCPS/MCPS/FRCS) of universities (Public or private sector) (The VC/Rector shall ensure that **max. two exceptional proposals per HEI will be submitted**)

Co-financing (including in kind or cash contribution) by the industry partner is mandatory

### **RAPID Innovation Seed Fund**

Students, recent graduates and/or faculty from universities (Public or private sector) (The VC/Rector shall ensure that **max. two exceptional proposals per HEI will be submitted**)

## **C. Dead line for submission of proposal**

**Full Proposals must be submitted to HEC by 5pm on April 3, 2020.**

## II. Proposal Preparation Instructions

### A. Basic Guidance

All RRII proposals must be submitted through the HEC online portal by the higher education institution at which the Principal Investigator is a faculty member.

### B. Proposal Formatting

- All Proposals should use the .docx Proposal Template Document as the basis for the submission. The section guidance (in light grey) should be deleted prior to proposal submission.
- Proposals must be submitted in English.
- Proposals should include a Table of Contents.
- All sections of the template must be completed prior to submission. The list of required sections – and the guidance for the content within each section – is provided in Section III below of this Call for Proposals.
- The page limit for each section must not be exceeded.
- All pages of the proposal should have a page number.
- Proposals should be submitted in 11 point, Calibri font.
- Tables should be completed in the format and length indicated in the relevant Proposal Template Document.
- Proposal sections should not include URLs for additional information. Information or documentation beyond that included in the written proposal will not be used in the evaluation process.
- Proposals should follow accepted academic practice in citing references throughout the proposal. References should be numbered sequentially, and listed separately as a required attachment to the proposal. References should be reported in a standard form, and include: the names of all authors; the article and journal title; book title; volume and page numbers; and year of publication. If available, a Digital Object Identifier (DOI) may be provided.

## III. Required Proposal Sections

The required sections for the Proposal submission are described below. All submissions should address the identified topics for each section. Do not exceed the maximum page limit for each section.

### A. Full Proposal Submissions

Principal Investigators must complete each section of the proposal as described in the attached link to the Full Proposal Template .docx Document. The section guidance (in light grey) should be deleted prior to proposal submission.

- [Web Link for Full Proposal Application Form](#)

#### **IV. Evaluation and Selection Process**

The selection of RRII awards will be made through an open, rigorous, transparent, competitive and merit-based process consistent with international standards for funding academic research projects. All Proposals submitted in response to this Call for Proposals will be evaluated by independent experts.

The Evaluation process consists of two sequential steps: administrative screening; and Desk/Panel Evaluation of all eligible Proposals.

##### **IVa. Proposal Screening**

For the administrative screening, the Higher Education Commission to ensure that the Principal Investigator and the lead institution submitting each Proposal is eligible to submit, the project aligns with one of the priority thematic areas, and that the necessary industry collaborators are identified.

If the Proposal is deemed appropriate in those elements described above, the Proposal will be forwarded for further evaluation as described below. For those Proposals that are deemed ineligible for the RRF, the Principal Investigator will receive a letter identifying the reasons why the Proposal will not be considered for further evaluation.

##### **IVb. Proposal Desk/Panel Evaluation**

For the Desk/Panel Evaluation, Proposals will be grouped by thematic area and assigned to a Panel for evaluation. Each Panel will be composed of a team of experts – including national and international research leaders, sectoral industrial representatives and subject matter experts – who will evaluate the written proposals. Each Proposal will be independently evaluated by at least two members of the Panel, and additional reviews may be obtained by appropriate sectoral industrial representatives and/or subject matter experts.

The expert evaluators will assess each proposal according to the alignment of the idea with the priority areas, the potential impact of the idea and the strength of the team.

All members of the Panel will discuss shortlisted proposals and may provide an opportunity to the applicant to defend his/her idea in the form of a virtual presentation before a select committee.

Following the Desk/Panel Evaluation of Proposals, a multidisciplinary committee of composed of the chairs of each thematic Panel will consolidate the thematic Panel results and make recommendations for RRII awards to the HEC. The recommendations will be reasonably balanced across disciplinary areas.

Proposals recommended for award should meet the following criteria: the proposal must be linked to a priority thematic areas as described in the Call for Proposals; based upon the written proposal, there is a strong likelihood of successful implementation of the proposed project; the project team and the institutional leadership should be capable of implementing the project; and the proposal must achieve a scoring threshold as determined by the evaluators in the Desk/Panel Evaluation to ensure quality.

At the conclusion of the Selection process, the evaluations of each proposal submitted will be shared with the proposing institution. Both the scoring rubric(s) and the written comments will be made available. For the Desk Evaluations, the identities of the expert evaluators will be redacted.

**Grievance procedure:** In exceptional circumstances, institutions submitting RRII Full Proposal that was not selected for funding may submit a written Notice of Grievance to the Ethical Appeal Review Board at the Higher Education Commission within 7 working days of selection results being announced. A Notice of Grievance is permitted only when the institution believes that the proposal was not evaluated fairly or in a reasonable manner.

## **B. Negotiation and Implementation**

Following the Evaluation and Selection process, the Higher Education Commission – through the RRII Program Manager - will enter into negotiations with the PI and the host institution on the following topics.

The final budget for each selected RRII budget will be negotiated following the evaluation and selection process. The budget will depend upon: the proposed research and development activities; the size of the research team; the costs associated with the proposed workplan; the resources required; the capacity of the research team to achieve the results; and the feedback to the PI provided through the Evaluation and Selection process. The negotiation on anticipated results will occur concurrently with the budget negotiation.

Prior to the formal signing of contracts and launch of the selected projects, several critical elements must be completed: (1) a revision and strengthening of the proposal in response to the comments and feedback provided in the evaluation process; (2) a fiduciary assessment and procurement plan; and (3) an environmental and social safeguards screening and management plan. In addition, a detailed implementation plan for the project must be prepared and approved.

### C. Project Websites

Full details of the RAPID Research and Innovation Initiative will be available on the Higher Education Commission website available at:

<http://www.hec.gov.pk>

Updated project information will be available at the project website provided below.

<http://www.hec.gov.pk/RRIF>

Questions regarding the RAPID Research and Innovation Fund may be directed to:

[Info-r&d@hec.gov.pk](mailto:Info-r&d@hec.gov.pk)