REQUEST FOR PROPOSALS

for supporting

Biotechnological Product/Technology development

from

Academia and Industry

under

i4 (BIPP, SBIRI) and PACE (AIR and CRS)

Under the present call, proposals are invited only in PRIORITY AREAS in following fields:

- **Healthcare**
  (Devices and Diagnostics, Drugs & Drug Delivery, Biopharmaceuticals, Biosimilars, Regenerative Medicine, Stem cells, Vaccines & Clinical trials)
- **Energy, Environment and Secondary Agriculture**
- **Agriculture, Veterinary Sciences and Aquaculture**

Proposals are invited under 2 sections as per the details below:

Section 1: Development of Devices, Diagnostics, Drugs, Delivery Systems, Assays, Manufacturing Processes and Technologies relevant to COVID 19

AREAS FOR SUPPORT:

Devices & Diagnostics:

- A rapid antigen detection test for COVID-19
- A high-throughput assay to measure SARS-CoV-2 neutralizing antibodies
- Components of Diagnostic kits (Primers, probes & enzymes) relevant to COVID 19
- Virtual distant measurement of temperature, BP, pulse rate, tele auscultation, POCD, development of medical grade high resolution cameras relevant to COVID 19
- Contactless diagnostic devices in the context of COVID 19
- Intensive care equipment for life support and emergency resuscitation in the context of COVID 19

Drugs & Drug Delivery, Biopharmaceuticals, Biosimilars and Regenerative Medicine, Vaccines and Clinical Trials

- Repurposing of drugs and novel therapeutics for COVID 19
- New methods/technologies for drugs and vaccines delivery in the context of COVID 19
- Development of *in vitro, ex vivo* and *in vivo* assay models for screening and evaluation of potential candidate drugs and vaccines relevant to COVID 19
- Development of novel manufacturing process/technologies for vaccines and therapeutics in the context of COVID 19
- Development novel technologies for production of monoclonal antibodies for therapeutic applications and diagnostics in the context of COVID 19

Energy, Environment, Industrial Biotechnology and Secondary Agriculture:

- Biomedical waste treatment/ management including waste generated due to used protective gear in the context of COVID 19
- Cost effective production technologies for (microbial route) API needed for treatment of COVID 19 and associated complications
- Production of enzymes (microbial production) used in COVID19 diagnostics kits
- Development of Anti-viral surface coatings
- Disinfection/ Sanitization technologies for food/ food based products (for use by end users)

Agriculture and Plant Science:

- Screening of extracts, fractions, phytochemical constituents and traditional formulations from medicinal and aromatic plant against SARS

Section 2: Other research areas related to healthcare, energy, environment, agriculture, secondary agriculture, veterinary science and aquaculture

AREAS FOR SUPPORT:

Following areas would be supported for the development of:

Devices/Diagnostics

- Medical grade Silicone rubber

Drugs & Drug Delivery, Biopharmaceuticals, Biosimilars and Regenerative Medicine, Vaccines and Clinical Trials

- Development of new drugs for combating viral infections
- Screening of existing libraries for potential anti-viral molecules

Energy, Environment, Industrial Biotechnology and Secondary Agriculture

- Metabolic engineering/synthetic biology for process development or scale up of:
  - ✓ Enzymes
  - ✓ API
  - ✓ Bulk molecules and high value products
  - ✓ Industrially relevant bio-based import substitutes
- Plant based proteins
- Value added products from:
  - ✓ Crop residues
  - ✓ Livestock and poultry waste
  - ✓ Leather industry waste

Agriculture and Plant Sciences:

- Technologies related to Precision agriculture and Digital Agriculture

Aquaculture:

- Control of Ectoparasites using herbal products
- Field usable diagnostic kits for diseases and algal toxins

Veterinary Sciences:

- Newer Adjuvants for animal vaccine development

Types of Projects to be supported:

- Products/Technologies with established Proof of Principle for AIR and Proof of Concept for CRS
- Projects that propose a process/product innovation with significant potential impact or commercial potential
- Developed process should be sustainable from an economic and environmental point of view and should be scalable
- The Technology Readiness Level (TRL) at the end of the project should be: **TRL 3** (Proof of concept established): AIR

  TRL 6 (Early stage validation): SBIRI

  TRL 7 and above (Late stage validation up to pre commercialization): BIPP & CRS

What is not supported?

- Concepts/exploratory research ideas without proper Proof-of-Principle (AIR and SBIRI) and Proof-of-Concept (CRS and BIPP)
- Proposals without preliminary data and potential for product/technology development
- Funding cannot be used to support PhD student research or any other academic research.
- The grant is not a research fellowship

Who Can Apply?

Eligibility:

PACE-AIR:

1. Under the scheme, academia (Public or Private Institute, University, NGO, or Research Foundation) having a well-established support system for research shall be the primary applicant.

It can apply either:

a) Individually, or

b) Jointly with academic* and/or industrial** partner

**For Public or Private Institute, University, NGO, or Research Foundation, proper registration/accreditation from a government body is mandatory*

***Participating company (if any) should be registered under the Indian Companies Act, 2013 with at least 51% Indian shareholding i.e., shares of the Company should be held by Indian Citizens holding Indian passport (Indian citizens do not include Person of Indian Origin (PIO) and Overseas Citizenship of India (OCI) holders).*

2. The applicant Company should have adequate in-house facility to address the project implementation or incubated with any of the recognized incubation facility.

PACE-CRS:

1. Academia* has to be the Primary Applicant with one or more partners of which at least one is a company**

**For Public or Private Institute, University, NGO, or Research Foundation, proper registration/accreditation from a government body is mandatory*

***Participating company should be registered under the Indian Companies Act, 2013 with at least 51% Indian shareholding i.e., shares of the Company should be held by*

Indian Citizens holding Indian passport (Indian citizens do not include Person of Indian Origin (PIO) and Overseas Citizenship of India (OCI) holders).

2. The applicant Company should have adequate in-house facility to address the project implementation (which shall be evaluated during the site visit) or incubated with any of the recognized incubation facility.

SBIRI and BIPP:

1. The proposals can be submitted
   a) solely by a Company* incorporated under the Companies Act, 2013 or Limited Liability Partnership (LLP)** incorporated under the Limited Liability Partnership Act, 2008 or Joint Ventures either in the form of Company/ LLP
   b) by any of the above entities jointly with other private or public partner(s) (Universities or Institutes).

**Minimum 51% of the shares of the Company should be held by Indian Citizens holding Indian passport (Indian Citizens do not include Person of Indian Origin (PIO) and Overseas Citizenship of India (OCI) holders)*

***Minimum half of the persons who subscribed their names to the LLP document as its Partners should be Indian citizens.*

2. The Applicant Company/LLP should either:-
   a) Have adequate in-house facility to address the project implementation (which shall be evaluated during the site visit) or
   b) Incubated with any of the recognized Incubation Facility

3. For Academic collaborator:

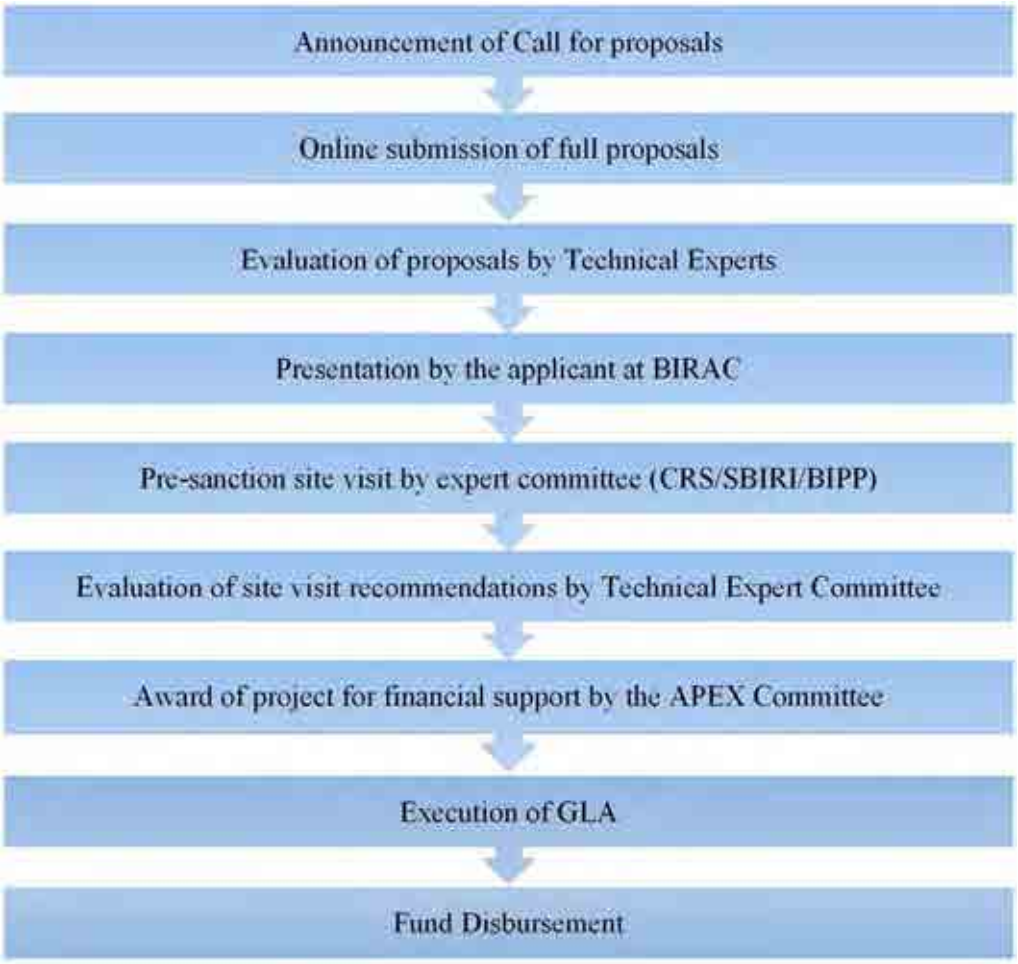
   Eligible Academia shall mean an entity which is having proper establishment documents:

   For Public or Private Institute, University, NGO, or Research Foundation, proper registration/ accreditation from a government body is mandatory like UGC affiliation certification, AICTE, CSIR /DSIR/SIRO certificate etc.

Duration of Project

Up to 18 months for proposal submitted under PACE-AIR. No specific duration has been fixed for PACE-CRS, SBIRI and BIPP schemes.

Evaluation Process



Funding

Funding support will be in the form of Grant-in-Aid and is scheme specific. Kindly refer to the guidelines of respective schemes for more details by visiting http://www.birac.nic.in

Fund Disbursement Policy

The fund disbursement is milestone based and will be released in 4-5 instalments as per the timeline of the project.

Instalment No.	When	Amount (for proposal more than 12 month)	Amount (for proposal less than 12 month)
1	Signing of Contract	30% of project cost	30% of project cost
2	Completion of 1st Milestone	20% of project cost	30% of project cost

3	Completion of 2nd Milestone	20% of project cost	30% of project cost
4	Completion of 3rd Milestone	20% of project cost	NA
5 (Final) *	Completion of project and submission of final report	10% of project cost	10% of project cost

**Since the last instalment is released after conclusion of the project, its nature would be reimbursement.*

Duration of Call for Proposals

The call would open on 15th July, 2020 and shall close on **31st August, 2020 at 5:30 p.m.**

Additional information

For details related to TRL definitions, schemes and submission of proposals, please log on to http://www.birac.nic.in

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