

Call Details

Antimicrobial resistance (AMR) is one of the major threats to human health in the 21st century, with some bacterial pathogens acquiring resistance to all clinically available antibiotics. Worldwide, infections caused by multi-drug resistant (MDR) bacteria are now a major cause of morbidity & mortality and have markedly enhanced healthcare costs. Considering AMR as a National priority, under **National Action Plan** endorsed by Govt. of India, the Department of Biotechnology has initiated a major **Mission program on Antimicrobial Resistance** with the vision to develop indigenous and cost-effective therapies against AMR; categorization of AMR-specific pathogen priority list of India; establishment of Bio-repository for AMR-specific pathogens; and development of rapid and cost-effective diagnostic kits to identify AMR-specific pathogens.

Considering AMR as the topmost national priority, the Department has notified **National Centre for Microbial Resource (NCMR), National Centre of Cell Sciences, Pune (an Autonomous Institute of DBT)** to function as Bio-repository for resistant microbes/infective agents (Bacteria and Fungi)” and to carry out collection, storage, maintenance, preservation and characterization of these microbes across the country. Further, the Department is working to share the information regarding National AMR-specific Pathogen list which will be available very soon including a landscaping report on existing rapid and cost-effective diagnostic kits to identify AMR-specific pathogens.

In a process to fulfill the ambition of this program, **Department of Biotechnology (DBT)** in collaboration with **Biotechnology Industry Research Assistance Council (BIRAC)** invites pre-proposals in the area of development of new antibiotics and alternatives to antibiotics to counter AMR.

Introduction of DBT-BIRAC Joint call:

Considering AMR as a major public health threat, the Department of Biotechnology, Government of India has announced this Joint call with the Biotechnology Industry Research Assistance Council (BIRAC) on antimicrobial resistance (AMR). This joint DBT-BIRAC call will focus on the aforementioned two specific mandates and will leverage the funding expertise of both the organizations. This initiative focuses on nurturing collaborations between academia and industry partners to enhance their capabilities and competencies for developing new antibiotics and alternative therapeutics for AMR.

Aim of the Call:

With the aim to discover, develop and exploit new resources for antibiotics and alternatives to antibiotics, under this joint Call, the Department is seeking concept note/pre-proposals under following two categories:

- A. Development of new antibiotics
- B. Development of alternatives to antibiotics-
 - a. Therapeutic antibodies
 - b. Phage therapy and
 - c. Anti-biofilm products

Scope of this Call:

From this joint Call, the Department seeks new innovative approaches that have the potential to transform public health action on a national or global scale by identifying and filling gaps in knowledge on the development of drugs to counter AMR. This Joint Call is aimed to support **collaborative proposals that combine complementary and synergistic research strengths in any one of the aforementioned categories/sub-categories**. The following pre-proposals would be encouraged for support:

1. Consortia-based concept notes/pre-proposals from academia (with/without industry) with already established/identified leads and explicitly outlined deliverables for further validation.
2. Innovative proposals with established proof-of concept.
3. Investigations based on, or involving, clinical trials.

[* Proposals that address the bacterial pathogens and the resistances identified in the Global priority list of antibiotic-resistant bacteria published by the WHO and multi- and extensively drug resistant *Mycobacterium tuberculosis* will only be considered.]

Expectation of the Call:

The call will cover research addressing the following topics:

1. Identification of new bacterial targets and/or therapeutic compounds.
2. Re-evaluation of existing anti-microbial compounds either alone or in combination with other drugs or immune-modulators.
3. Investigation on novel enzyme(s)/ targets/ mechanisms to overcome known antimicrobial resistance mechanisms and restore susceptibility to conventional antibiotics.
4. Investigation on alternative therapeutics that enhances immune pathogen elimination through therapeutic antibodies & phage therapy; and disrupts colonization & bio-film development through anti-biofilm products.

Not within the scope of the call:

1. Over-ambitious investigations encompassing both the categories/clubbing two or more sub-categories of alternatives to antibiotics.
2. Individual projects with limited R&D value.
3. Proposals focusing only on knowledge generation without a drug candidate/alternative candidate. These may include:
 - a. Investigations addressing cross talk between the host and pathogen, as well as the relationship between microbes, environment and infection.
 - b. Assessing the role of commensal flora in homeostasis and microbe's pathogenicity, and elucidating how commensal organisms or pro-biotics can be used to prevent or treat infections.

- c. Investigations on initial steps of the infection process.
4. Studies on bacteria not on the WHO Global priority list.
5. Investments in research infrastructures are not covered under this call.

Primary Applicant: The primary applicant for this call is mandatorily academia either alone or with industry.

Collaborations: Collaborative proposals would be encouraged. These may be:

1. Academia with academia
2. Academia with industry

Please note that even for collaborators, the basic eligibility criteria as below needs to be met.

Eligibility criteria:

Please note the following eligibility criteria carefully.

1. Eligible Organizations

- a. Central/State Govt. Institutions of Higher Education
- b. Private Institutions of Higher Education
- c. Research institutes, universities, medical schools, IIT's and other engineering institutions, other recognized research laboratories in the public sector and not for-profit institutions.
- d. The institution must be recognized by DSIR as a Scientific and Industrial Research Organization (SIRO), if outside public sector.

2. Required Registrations

Private institutions/Hospitals/ NGOs should be registered in Darpan Portal, Niti Aayog website.

3. Eligible Individuals-Principal Investigator(s)

Scientists working in Universities/Academic Institutions/National Laboratories/Industries [Department of Scientific & Industrial Research (DSIR)-Recognized R&D Centre] & Non-Profit Organizations with necessary facilities and strong scientific background in the proposed area as the Principal Investigator(s) are invited to develop an application for support.

4. Eligible Industry (Companies)

An Indian company is defined as one which is registered under the Indian Companies Act, 2013 and minimum 51% of shares of the Company should be held by Indian citizens holding Indian passport. (Indian Citizens do not include Persons of Indian Origin (PIO) or Overseas Citizen of India (OCI) holders).

Submission Process:

The proposal submission is in two phases:

1. **Phase I:** Letter of Intent (LOI) - In this phase, interested applicants may apply through a LoI to be submitted online on the link provided.
2. **Phase II:** Full proposal - successful LoIs will be invited to submit full proposals in this phase.

Evaluation criteria:

1. Scientific merit
2. Clarity of hypothesis
3. Relevance and ability to implement approaches
4. Background of the investigator
5. Feasibility of conducting the research in the present settings

Evaluation process:

1. In Phase I, only LoIs will be accepted through the online system.
2. These will be evaluated by an experts committee and successful LoIs will be invited to submit full proposals.
3. The full proposals will be evaluated by Technical Expert Committee.
4. Final recommendations will be communicated.

Mode of Submission:

LoIs may be submitted in the prescribed format (**Annexure-I**), clearly stating “**Request for Application: Innovative Approaches to address Antimicrobial resistance**” through online: <http://dbtepromis.nic.in/pi/loi.aspx>. Subsequently, two hard copies should also be sent to: Dr. Vinita N. Chaudhary, Scientist ‘E’, Department of Biotechnology, Block- 2, Room No.816, 8th floor, CGO Complex, Lodhi Road, New Delhi – 110003.

Below mentioned are the steps to submit LOI.

1. Open dbtepromis.nic.in website
2. Sign in into your account
3. Click on Login as PI button
4. PI user interface page will open
5. Now copy paste the link <http://dbtepromis.nic.in/pi/loi.aspx>

For any queries please contact:

Dr. Sundeep Sarin, Adviser, DBT: sundeep@dbt.nic.in

Dr. Vinita Chaudhary, Joint Director, DBT: vinita.chaudhary@nic.in

Dr. Aparna Sharma, Manager-Technical, BIRAC: tech01.birac@nic.in

Timeline:

Call for LoI opens: **1st October, 2018**

Call for LoI closes: **15th November, 2018**

LoI Selection by **31st December, 2018**

Full proposal submission: **31st January, 2019**

Full proposal selection by **15th March, 2019**

**Proforma for submission of Pre-Proposal on Innovative
Approaches to address Antimicrobial resistance**

Annexure-I

(Maximum five single space printed A4 pages)

1. Title of the Concept note/Pre-Proposal:

2. Coordinator/Principal Investigators/Co-investigators:

Name:

Address:

Telephone:

Email:

3. Background of work:

a) Category under which proposals to be submitted (Please note that you can only apply under any one of the following categories):

- New antibiotics
- Therapeutic antibodies
- Phage therapy and
- Anti-biofilm products

b) What is the primary aim of your proposal?

c) What is the novelty and relevance of your approach to address the problem?

d) What is the preliminary work done? Please include details and data on the same.

e) What are the Primary Objectives of the present proposal?

f) What is the workplan for achieving the stated primary objectives?

g) What is the team competence and infrastructure availability for doing the study in your present institution/workplace/collaborations?

h) Best 3 publications in the last 3 years in relevant areas:

i) Brief CV of the investigators/collaborative partners: