C-CAMP AMR Quest 2020

FAQs

1. What is the C-CAMP AMR Quest?
The C-CAMP AMR Quest is a nationwide awareness program to identify and reward path breaking revolutionary, innovative ideas and solutions in the Antimicrobial Resistance (AMR) domain and present opportunities for development and commercialization of these. The best ideas will win exciting rewards:

- **Acceptance** into 3-month C-CAMP AMR Accelerator Program and evaluation of funding opportunities by CARB-X
- **Participation** in any one of the International Conferences/Programs, with all costs covered as mentioned in the website.

2. Who is organising the C-CAMP AMR Quest?
The Antimicrobial Resistance Quest is organised by C-CAMP.

3. In what domains of AMR, can ideas be submitted?
Ideas can be submitted in any of the following domains : **Non-traditional therapeutics** including the indirect acting small molecules (virulence, potentiators, BLI combinations, etc), Direct- and indirect-acting large molecules (peptides, etc.), phage, microbiome, nucleic acid, anti-sense, Drug conjugates (ADC, other dual acting drug conjugates), **Preventatives** including vaccines, preventative antibodies and fragments, and microbiome products, **Diagnostics** including devices which can diagnose ID/AST of pathogens, **Direct acting small molecule therapeutics** including new classes of drugs or new targets only

4. Who can apply for the C-CAMP AMR Quest?
- Individuals - Including researchers, scientists, post-doctoral fellows, academicians, students and individual innovators
- Start-ups, SMEs and Large Companies
  Please note that there are two criteria Pre-POC and POC (information is given in further questions below)

5. How many applications can one-person company submit?
An individual or a company can submit multiple applications. However, note that (a) you will have to register separately for each application and using separate email-ids, (b) if the multiple applications submitted by you get the same score only one idea will proceed to the next round.

6. How does one apply?
You must apply online in the prescribed form. Only applications received through this website will be considered for review. You can follow the link http://www.ccamp.res.in/amr-quest to apply.

7. Will the idea and details I share be kept confidential?
All details submitted in the application form as well as subsequent presentations will be treated as confidential to the extent possible. All reviewers will sign CDA/NDA. However, the responsibility of protecting information prior to putting it out in the application form or sharing it with anyone lies

wholly with the applicant and we strongly recommend that any applicant that has any concerns regarding Intellectual Property (IP) protection and disclosure of information contact an appropriate and competent IP counsel before filling in the application.

8. Does the idea have to be original?
The idea can be original, or it should demonstrate a significant improvement over currently available solution.

9. Is there a fee to apply for the quest?
No, there is no fee to apply for the quest.

10. What is the deadline for applying for the quest?
The deadline for applying to the quest is 15th March 2020.

11. Do we need to have validation studies or prototype ready to be able to apply?
No, this is not mandatory as this quest is primarily seeking deep science ideas. If you already have validation studies or a prototype, you can add this information in the supporting documents section of the application form. However, this is not part of the selection criteria.

12. Are we required to provide any proof of identity?
Yes, you will be asked to present the photo identity card during grand finale.

13. What is the selection process?
The selection process will comprise a review of the application form by a competent review panel in the first round. Applicants shortlisted after the first round will be asked to make presentations to the review panel. This will be Round 2. Applicants selected after Round 2, will be presenting to the Grand Jury who will then select the winners.

14. What is the selection criteria?
The selection criteria for Round 1, Round 2 and Grand Finale A review panel comprising experts from academia and industry community will review the applications. The applications will be evaluated for novelty, scientific strength, impact and commercialization potential. Pre-POC: The applications will be evaluated for novelty and scientific strength POC: The applications will be evaluated for novelty, scientific strength, impact ((including Ability to address medical needs in AMR (from WHO priority pathogen list) and commercialization potential) and commercialization strategy.

15. How will I know if I am selected?
Only the selected applicants will be notified by email. It is the responsibility of the applicant to check their emails regularly around the date of “notification of acceptance”. The selected applicants who do not respond to the notification of acceptance email will not be followed up further after a waiting period of three days.

16. Who are the reviewers and jury members?
The reviewers and jury members will be domain experts from academia and industry.

17. Will I get any assistance to attend the Grand Finale?
The organisers will reimburse travel expenses on actuals up to maximum of Rs. 5,000. The participants selected will have to pay for all other personal expenses, such as laundry, printing, photocopying, telephone calls etc. There are no fees for the Grand Finale.

18. Will laptops be provided?
No, you will need to bring your own laptops, chargers, and adaptors. We will provide the LCD projector.

19. When will the rewards be given?
The rewards will be declared at the Grand Finale on 25th-30th April 2020.

20. What is POC?
POC is proof of concept.

21. What are the stages included in Pre-POC?
Please refer table 1 for Drugs and Vaccines, table 2 for Diagnostics, given below.

22. What are the stages included in POC?
Please refer table 3 for Drugs and Vaccines, table 4 for Diagnostics, at the end of this document.

Table 1: Stages included in Pre POC (Proof of Concept) for Drugs, Vaccines and Biotherapeutics

Stage	Drugs	Vaccines
Ideation (TRL- 1)	Need identified, Basic principles observed and reported (Scientific research begins to be translated into applied research and development)	Need identified, Basic principles observed and reported (Scientific research begins to be translated into applied research and development)
Proof of Principle (TRL-2)	Research ideas developed, hypothesis formulated and protocols developed (Idea proven on initial level by In-vitro studies i.e. biochemical studies etc)	Epidemiologic study, Research ideas developed, hypothesis formulated and protocols developed (Initial level in vitro studies, Development of working Cell Bank)

Table 2 Stages included in Pre POC (Proof of Concept) for Diagnostics

Stage	Medical Devices including diagnostic devices	In vitro Diagnostic Kits & reagents	Biomedical implants
Ideation (TRL- 1)	Need identified, Basic principles observed and reported (Scientific research begins which can be translated into applied research and development)	Need identified, Basic principles observed and reported (Scientific research begins which can be translated into applied research and development	Need identified, Basic principles observed and reported (Scientific research begins which can be translated into applied research and development)

Proof of Principle (TRL-2)	Market surveillance data and competitor analysis available to support the idea. Basic device design ready and product specifications defined based on the competitor analysis and patent landscaping. FTO ensured. Development of individual components initiated.	Hypothesis formulated and protocols developed. Market surveillance data and competitor analysis available to support idea. Individual core components of kit/reagents (Antibodies/ Antigens/Aptamers/Nano particles) finalized, developed/procured for testing	Market surveillance data and competitor analysis available to support the idea. Basic implant design ready, candidate materials shortlisted and product specifications defined based on the competitor analysis and patent landscaping. FTO ensured

Table 3 Stages included in POC (Proof of concept) for Drugs, Vaccines and Biotherapeutics

Stage	Drugs	Vaccines
Proof of Concept demonstrated (TRL- 3)	Hypothesis testing and initial proof of concept (PoC) is demonstrated in a limited number of in vitro models and limited in-vivo efficacy studies (Studies proven by In-vitro model studies i.e. relevant Cell based models, ex-vivo, organoid cell model and In-vivo efficacy in minimum number of animals).	Hypothesis testing and initial proof of concept (PoC) is demonstrated in a limited number of in vitro models and limited in vivo efficacy studies (Formulation development, complete in-house testing of the formulated vaccine by in vitro model studies and In vivo efficacy in limited number of animals)
Proof of concept established (TRL-4)	Research ideas developed, hypothesis formulated and protocols developed (Idea proven on initial level by In-vitro studies i.e. biochemical studies etc. Efficacy, & safety of candidate drug formulation is demonstrated in a defined animal model (Results of formulation studies, pharmacokinetic studies & ADME, PD , safety of candidate formulations at preliminary level and efficacy in in-vivo disease model))	Efficacy & safety of vaccine candidate is demonstrated in a defined animal model (Results of serological studies in different animals at preliminary level and efficacy in defined in vivo model, Manufacturing and QC release of vaccine for Studies, Scale up Development)
Early stage validation (TRL-5)	Pre-clinical studies, including GLP efficacy, acute and chronic toxicity in animal model producing sufficient data for	Pre-clinical studies, including GLP efficacy, acute and chronic toxicity, all the studies mandatory for safe

	DCGI application for clinical trials. DCGI approval for Phase1 trial	exposure to humans such as repeat dose toxicity (RDT) and safety in animal model producing sufficient data for DCGI application for clinical trials

Table 4 Stages **included in POC (Proof of concept) for Diagnostics**

Stage	Medical Devices including diagnostic devices	In vitro Diagnostic Kits & reagents	Biomedical implants
Proof of Concept demonstrated (TRL- 3)	Individual modules/Components/PCBs/Softwares/Systems developed and tested separately for its functionality on a breadboard/laboratory level. Material safety, electrical safety & biocompatibility of the systems demonstrated	Individual core components optimized at lab scale. Demonstrated the limit of detection/Sensitivity with metabolite serial dilution or ELISA or spiked biological sample studies.	Material research completed and material properties of the finalized material/composites compared against benchmarks. Relevant ASTM standard tests (strength, ductility, corrosion, surface properties, antimicrobial activity, usability, shelf life etc.) on the material performed successfully. Material sterilization method finalized. Biocompatibility (ISO 10993) proven in in vitro cytotoxicity assays
Proof of concept established (TRL-4)	Functional Prototype developed by integration of different modules and safety, efficacy and performance of candidate device or system demonstrated in a defined laboratory, Simulated Environment or animal model (with Institutional Animal Ethics Committee approvals)	Optimized core components integrated into the kit or platform (Microfluidics/ filter paper/ LFA etc) along with the reagents to come up with a functional prototype of the kit. Integrated system tested in house with metabolite	Material safety and or imaging compatibility proven in in vivo small animal model study (with Institutional Animal Ethics Committee approvals). Functional Prototype implant device developed as per the design in a near GMP condition. Sterilization and packaging established

Early stage validation (TRL-5)	Relevant IEC & ISO tests (Electromagenetic interference, Electromagnetic compatibility, Electrical safety, Biocompatibility, software test, radiation safety test drop test, packaging test, transportation test, physico –chemical and mechanical testing etc.) of the device performed and safety proven. Quality management certification (ISO13485) in place. Design iterated prototype ready to go for clinical validation. Clinical study plan approved by Institutional Ethical Committee and/or CDSCO	Integrated system tested in-house extensively with clinical samples (Blood, Urine, Sputum etc.) before taking it for clinical validation. Analytical validation of the kit completed. Shelf life, stability data of the kit reagents available. Quality management certification (ISO13485) in place Clinical study plan approved by Institutional Ethical Committee and/or CDSCO	In vivo pre-clinical studies performed (with Institutional Animal Ethics Committee approvals) using functional prototype implant device on the relevant small or big animal (disease) models to establish its safety (tissue reactivity/ allergy/degradability, Histopathology) and efficacy (. Quality management certification (ISO13485) in place. Design iterated prototype ready to go for clinical validation. Clinical study plan approved by Institutional Ethical Committee and/or CDSCO