CARB-X

Combating Antibiotic-Resistant Bacteria

Applying to CARB-X

FAQs

If you have questions that are not addressed below, please input your questions in the form on our Applicant Questions webpage: https://carb-x.org/apply/applicant-questions/ We will continue to augment these FAQs in the coming weeks.

If you need technical assistance submitting your application through the CARB-X Portal, please reach out to carbxit@bu.edu.

1. **Q: if I submit an EOI to funding cycle 1, and it does not advance to the Project Narrative stage, can I submit a revised EOI with new data/information in funding cycle 2 or 3?**
   A: Yes.

2. **Q: if I submit an EOI to funding cycle 1, and it advances to the Project Narrative stage, is my Project Narrative due on 23-Dec02022 (the cycle 1 deadline) or can I submit it in accordance with the deadline for cycle 2 or even cycle 3 (27-Mar-2023 or 26-Jun-2023)?**
   A: Your Project Narrative is due on 23-Dec-2022; once in cycle then the dates are those in that funding round.

3. **Q: If I apply during the first cycle for a H2L program, could I later withdraw my application and submit a new application for LO in the second cycle as I would have obtained fresh data that would allow me to fulfil the LO criteria?**
   A: By the time you withdraw the application, you could have received an EOI Disposition Notice (28-Nov-22), submitted your Project Narrative Submission data (23-Dec-22) or undergone the Advisory Review Period (09-January-2023 to 27-January-2023). You can certainly pull your application during this process and submit a new EOI before the EOI submission date on 30-January-2023, but the risk is that the new EOI might not be competitive in this next round.

4. **Q: Will CARB-X offer accelerator support to applicants for the EOI stage?**
   A: No.

5. **Q: Will feedback be provided on EOIs?**
   A: No.

6. **Q: Are there any restrictions on whether investigators/applicants can be on multiple applications? For example, an applicant listed as CI on one application and AI on another application.**
   A: Applicants can certainly be listed in different applications.

7. **Q: We started filling in the EOI template under Oral Therapeutics category. We have one question regarding the susceptibility/resistance pattern. Under every**

pathogen, a list of antibiotics is given. Not ticking any box, does it simply not done or is cross-resistant. Kindly clarify so that we are able to provide the appropriate information.
A. If you tick a box, it indicates that your product can cover strains of that pathogen that are resistant to that antibiotic class. E.g., if you tick "beta-lactams" for *A. baumannii*, it means that your product works against *A. baumannii* strains that are resistant to beta-lactams. If you tick no boxes, it means that your product does not (or is not yet known to) work against any antibiotic-resistant isolates of that pathogen.

8. **Q: Can a company that is already in the CARB-X portfolio apply to the current funding round?**
   A: Yes.

9. **Q: Can an existing PD re-position their program for a new TPP submission? Would this be considered a new program for new funding?**
   A: Yes, but we strongly encourage you to focus efforts on the strongest TPP.

10. **Q: Is an oral adjunctive therapy, such as a BLI or potentiator, responsive?**
    A: Yes.

11. **Q: If a single novel technology, or compound class, could be targeted to any of several narrow spectrum pathogens individually, can a separate proposal be submitted for each targeted pathogen? (i.e. one product for oral UTI, and one product for oral Gram+ respiratory)**
    A: Yes, you could, but we strongly encourage you to focus efforts on the strongest TPP.

12. **Q: Are non-traditional modalities responsive to these TPPs?**
    A: Yes, as long as orally active.

13. **Q: Are host-modulating therapeutic approaches responsive to these TPPs?**
    A: No if the product targets the host exclusively, but yes if the product has a dual mechanism, one which targets the pathogen directly and the other the host.

14. **Q: Can the therapeutic be a novel entity belonging to an existing antibiotic chemical class?**
    A: Yes.

15. **Q: Can the cost-share come from other grant funding for overlapping scope of activities?**
    A: Yes, if the other granting agency is compatible with CARB-X's terms. Scopes of work cannot be duplicative but can be complementary. U.S. federal funding usually cannot be used to meet cost share.

16. **Q: Regarding the cost share requirement: can the cost-share include in-kind matching (e.g., labor/time) versus only cash?**
    A: No, the PD needs to provide a monetary cost-share equal to 30% of the total $US cost of the program for H2L, LO and PC, and 40% of the total $US cost for Phase 1.

17. **Q: I am doing some consulting work for a company that is developing a novel Gram-positive specific antibiotic for IV and oral delivery. Their focus is on Gram-positive skin and skin tissue infections (ABSSSI), with possible future**

development for Gram-positive bacteremia/endocarditis, diabetic foot infections and/or bone/joint infections. Due to a lack of activity vs. fastidious Gram-negatives, this project would not be ideal for CABP. Your online TPP lists CABP first, as well as coverage of fastidious Gram-negatives in the list of covered pathogens. Can this company apply for CARB-X funding under this omnibus solicitation?
A: Yes, community acquired pneumonia is only one of the indications we are interested to target, and you are correct, for this it would be ideal to have activity against the fastidious Gram-negatives. We are also interested in skin infections, which do not require activity against the Gram-negatives. Please feel free to apply.

18. **Q: Under Gonorrhea Products, it says: The scope is open to products that address Neisseria gonorrhoeae, including FOR EXAMPLE (my emphasis):**

    Oral therapeutics, or in special cases, IM therapeutic;
    Low-cost vaccines; and
    Rapid diagnostics

    My company's product is an intravaginal ring that will prevent gonorrhea infection in women. This does not fit any of the examples listed, and thus none of the TPPs. Is our Product responsive to the solicitation?
    A: No, only vaccines are currently being considered.

19. **Q: We Have developed oral administered agent with limited bioavailability to target gram positive pathogens in intestines. We target C.difficile specifically does that fall into the funding scope?**
    A: No, *C. difficile* is out-of-scope.

20. **Q: Enterotoxigenic E. coli (ETEC) was listed under the call for vaccines for "neonatal sepsis". Since ETEC is almost always an intraluminal non-invasive diarrheal pathogen that is seldom a cause of bacteremia, I wanted to make sure that ETEC was really intended as a target pathogen for this round. Certainly maternal vaccination could be of benefit to very young children who otherwise succumb to severe infections from ETEC and are at risk for death from diarrhea and other infections, however I would not anticipate that it would prevent sepsis per se.**
    A: We are seeking proposals for maternal vaccines against neonatal sepsis caused by *E. coli*. Your choice of antigens should be promising of high coverage among clinically relevant strains, and we also want to know what the prevalence of these antigens is among ETEC strains.

21. **Q: Would engineered phage therapy delivered via inhalation for respiratory infections (gram-negative or gram positive pathogens) not be considered in the 2022-2023 funding rounds?**
    A: The inhalation route of administration is out-of-scope for the current funding call.

22. **Q: When and how would CARB-X funds be transferred to a company after entry into the portfolio?**

A: After a contract has been signed between the PD and CARB-X, funds will be transferred monthly as reimbursement for expenses incurred by the Product Developers (PDs).

23. Q: What is the nature of CARB-X Funding? Is it 100% non-dilutive?
A: Yes.

24. Q: Is there any requirement for MOA novelty or are 'known MOAs' also in scope?
A: Known MOAs are also in scope, but require strong differentiation versus what is currently available in the clinical setting.

25. Q: Can a consortium of 2 or more entities apply?
A: Yes, but contributions from the different partners need to be specified, and a Principal Investigator needs to be stated.

26. Q: Does CARBX funding provide funding alone, or is there access to specimens available/provided?
A: CARB-X provides wrap-around services and as such, we will do our best to support access to specimens for funded companies.

27. Q: Does CARB-X have budget guidelines and/or maximums for each stage of development?
A: For therapeutics: 30% PD contribution for H2L, LO and PC, and 40% for Phase 1. CARB-X funding caps (I.e. maximum contribution from CARB-X) for H2L, LO, PC and Phase 1 are US$ 3.27, 3.27, 4.08, 3.94 M respectively.
A: For vaccines: 30% PD contribution for H2L, LO and PC, and 40% for Phase 1. CARB-X funding caps (I.e. maximum contribution from CARB-X) for H2L, LO, PC and Phase 1 are US$ 3.27, 3.27, 7.35 and 3.94 M respectively.
A: For Dx: 30% PD contribution for Feasibility and Product Development. CARB-X funding caps (I.e. maximum contribution from CARB-X) for Feasibility and Product Development are US $ 5.71 and 8.17 M respectively.

CARB-X Funding "Up To" Caps, by Stage ($M, USD)

		Therapeutics				Preventatives				Diagnostics	
	Phase of Development	Hit-to-Lead	Lead Op	Pre-clin	Phase 1	Hit-to-Lead	Lead Op	Pre-clin	Phase 1	Feasibility	Prod Dev't
	Full stage cost basis	**4.66**	**4.66**	**5.84**	**6.56**	**4.66**	**4.66**	**10.5**	**6.56**	**8.17**	**11.67**
For Profit	**CARB-X funding cap**	3.27	3.27	4.08	3.94	3.27	3.27	7.35	3.94	5.71	8.17
	PD Cost Share	1.39	1.39	1.76	2.62	1.39	1.39	3.15	2.62	2.46	3.5
	Cost Share %	30%	30%	30%	40%	30%	30%	30%	40%	30%	30%
Non-Profit	**CARB-X funding cap**	3.96	3.96	4.96	5.58	3.96	3.96	8.92	5.58	6.94	9.92
	PD Cost Share	0.7	0.7	0.88	0.98	0.7	0.7	1.58	0.98	1.23	1.75
	Cost Share %	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%

28. Q: Do you have any templates of EOI or proposal for the applicants?
A: We do not have templates for this funding call. Please fill out the application following the prompts requested in the submission form.

29. **Q: In the Projects Costs tab: is the amount requested just the cost of the current stage of development (e.g., H2L) or the total costs of the program (e.g., H2L + LO + preclinical + Ph1)?**
    A: The application requests to indicate the stage(s) for which you are seeking CARB-X funding (for example, if a project is in H2L and the hope is to advance it into and through LO, Pre-clinical and complete a Phase 1 trial with CARB-X funding), then the budget requested would be for all of these stages.

30. **Q: Funding support question for clinical stage compound.**
    Will formulation development and manufacturing of API and DP, as well as microbiological assays development to support Phase II clinical study for gonorrhea within the scope of funding under "Additional CMC, formulation, and analytical activities required to support further clinical development"?
    A: Yes, formulation development and manufacturing of API and DP, as well as development of microbiological assays to support further development are within the scope of funding of Phase 1, but please be aware that CARB-X caps its funding for this stage at 3.94 M.

31. **Q: Need clarification on the maximum # of words or characters.**
    In online portal: Please describe your product in 5000 characters or less.
    But the instruction is for 1000 words or fewer. Which one do we follow?
    A: Please describe your program in 5000 characters or fewer.

32. **Q: Can you please clarify if the 5000 character limit INCLUDES spaces or just actual characters? This can make about 1000 characters difference in length of a summary.**
    A: The 5000 characters include spaces, one space is equivalent to one character.

33. **Q: I followed one of your recent webinars on the new funding rounds. In this I asked a question concerning inhaled drugs. These are currently not included in the call as far as I understood from the answer. We currently have a very interesting compound very effective against resistant Pseudomonas lung infections, we anticipate application by inhalation of a dry powder which is very accessible and easy. We have very convincing efficacy data in an animal model. But obtaining funding for further development is challenging in the antimicrobial space. Will there be any funding possibilities suitable for this in the near future? In general could we get feedback on our current data package as CARB-X seems to have expertise in this direction**
    A: We really do not know whether inhalation products will be the focus of a future funding call, but if you are interested in obtaining feedback on your program, you can submit it to CARB-X Connect.

34. **Q: If the application will be for infections caused primarily by Gram-positive organisms in the Hit to Lead stage, the compounds must show activity against all these strains "S. aureus (MR/MS), S. pneumoniae, S. agalactiae, S. pyogenes, with additional coverage of fastidious Gram-negatives including H. influenzae and M.**

catarrhalis" if it indication is CABP?
Also if the main indication is wound and skin infections by S. aureus, should the compounds show also activity against these strains?
A: Activity against *S. aureus, S. pneumoniae, H. influenzae* and *M. catarrhalis* is required for CABP. Activity against only *S. aureus* is sufficient for a narrow spectrum product which targets wound and skin infections caused by this organism; however additional activity against *S. pyogenes* and *S. agalactiae* would enable broad-spectrum activity against these wound and skin infections.

35. **Q: Hi, just checking whether a (probably) non-oral antibody recruiting molecule developed to prevent neonatal sepsis would be considered under the "vaccines for neonatal sepsis" theme.**
A: Your product is out-of-scope.

36. **Q: We have submitted our EoI (CARBX-1245). When could we expect feedback if we are selected or not to the next round?**
A: Decision letters will be sent November 28th, 2022.

37. **Q: Can you please share the form for the "full proposal" for Gonorrhea Low costs vaccines? We have submitted the LOI and would like to get started with the long form application planning ahead of LOI assessment, as there is only limited time. Having applied previously for pseudomonas vaccines development funding, we know there is much work ahead**
A: The template for the Project Narrative will be published soon and made available, at the same time, to all applicants that are invited to apply.

38. **Q: just checking whether a (probably) non-oral antibody recruiting molecule developed to prevent neonatal sepsis would be considered under the "vaccines for neonatal sepsis" theme**
A: Waiting for Ed to respond.

39. **Q: I have identified an unexplored target present in all bacteria. We are at the earliest stages of identifying inhibitors of this target. Does Carb-X fund this very basic research at this early stage or do you only step into the funding picture once positive hits have been identified?**
A: Your program is too early to apply to CARB-X as we fund programs only from Hit-to-Lead to Phase I. You indeed need to identify a hit.

40. **Q: A program may not be invited to submit a Project Narrative because the EOI did not provide sufficient information to judge the merit of the application. What does it mean?**
A: It means that the application did not provide data on the microbiology, toxicology, pharmacology or pharmacokinetics of the product under consideration. A common reason is that bioavailability data were not included in the EOI application.

<u>Questions on NG Diagnostics:</u>

41. **(a) What are the metrics requirements associated with your AST test result. Generally, CLSI serial microdilution results are accurate/precise to within +/- 1 serial dilution. Do you have any comparable guidance, or is that something that can be defined in the context of the clinical utility?**
(b) Do you have any caps on the cost of the instrument, and cost of the consumable kits
A: You should propose to adhere to guidelines that are relevant in the markets that your product is targeting. For the U.S. markets, CLSI guidelines would make sense. The price of your products should be affordable and accessible in their target markets. If you are targeting LMIC's, FIND has published very detailed TPPs that you may find useful.

42. **Q: I understand CARB-X's focus is in the translational phase, from feasibility up to development of alpha prototype. The October 2022 RFP has one TPP component for Dx, which is for Ng. The TPP states preference for commercially available technologies, and current research use instruments are out of scope. This seems contradictory to the general funding phase for CARB-X, which is before commercial launch. Can you clarify? Do you expect the same TPP to be used for all three rounds of funding?**
A: As the TPP states, there is a preference for existing platforms, but novel platforms will also be considered. So please do feel free to apply!

43. **Q: Regarding what is "in scope" for diagnostics, I notice that the development description includes work toward a "fully integrated prototype using clinical samples, preferably in the hands of external users"; however, below it also states that clinical validation is considered "out of scope". Can you clarify if clinical studies can be funded by the CARB-X grant?**
A: Clinical studies are not funded by the CARB-X grant for diagnostics. We encourage companies to use clinical samples in Development and resources may be available to support the procurement of these samples.

44. **Q: We understand that ID-phenotypic AST platforms are preferred but challenging due to bacteria doubling times. Are all results (ID+AST) expected within the TPP TTR of >30 or >60 minutes? Or can they be staggered, where pathogen ID results would be available within this time and AST after? If so, what is an acceptable amount of time for AST results?**
A: The preference is for a solution that provides an actionable result within the timeframe of a patient visit. Consideration of the clinical path and competitor products will inform the time to aim for an AST result.

45. **Q: In your diagnostics development stages document, the feasibility stage covers "Benchtop feasibility demonstrated with clinical specimens". So what type of data is required in the EOI?**
A: If clinical specimens are not available, and this may be the case, then data using contrived samples with spiked isolates or isolates alone will be considered.

46. **Q: I think many of the questions regarding time to result for the Gonorrhea area of interest are in the context of phenotypic AST -- which requires well over an hour for result -- is a rapid Phenotypic Gonorrhea AST platform/technology responsive if it requires over an hour time-to-result and cannot ID NG?**

A: Consideration of the clinical pathway and competitor solutions will inform the answer as to the time to result acceptability. If ID solution is not part of the technology then describing how existing technology can be used to provide the ID in concert with the AST solution is required.

47. **Q: When clarifying clinical specificity and sensitivity for possible NG diagnostics, can such values be calculated from essential and categorical agreement with tests like Etest as opposed to agar dilution despite that being the gold standard?**
    A: Yes, please state the reference test.

48. **Q: For the gonorrhea diagnostic products, the TTP states preference is for existing commercially available technologies. Will an innovative platform that is not commercially available be considered? If so, is there a TRL maturity level requirement?**
    A: TRL 3 is compatible with the start of the “Feasibility” stage.

49. **Q: If we have not done specificity and sensitivity testing yet, but plan to. What should we put into the application form? It will not let me put letters in.**
    A: If the form allows it is acceptable to leave this blank. If you have an error with leaving this blank, please let us know and we will modify the form.

50. **Q: TTR requirements are relatively long especially for path ID only. How important is speed, ease-of-use, eventual cost of use in terms of eventual accessibility to LMICs.**
    A: Very important! Please speak to how your product would fit into the clinical care pathway in the target setting of use and put forth a competitive proposal.

51. **Q: Is a molecular diagnostic test/platform considered to be in scope of the current solicitation?**
    A: Yes.

52. **Q: Are non-lateral flow cartridge & reader solutions in scope?**
    A: Yes.

53. **Q: Are readers for LFA within scope and what stage of development should we demonstrate the reader to be for being considered for funding?**
    A: Yes, TRLs 3-5 are in scope. Please provide as much information as possible in regards to potential compatibility with LFA platforms.

54. **Q: For diagnostic platforms, should we speak to other relevant targets that we can test for, in addition to gonorrhea? Is there an advantage or goal to fund projects that have enhanced multiplexing capability?**
    A: Yes, please note any additional targets, as these are a bonus.

55. **Q: There is a 30-60 minute target for time to results for diagnostics. When does the clock start - is it from the time when the sample is collected from the patient?**
    A: Please speak to how your product fits within the clinical care pathway. If sample transport is required (not a point-of-care technology), please speak to how the pathogen will be maintained during transport. The time officially starts once the hands-on process for the diagnostic test begins (please include any sample prep).

56. **Q: If time-to-result for a diagnostic requires more than 60 minutes, could that diagnostic still be eligible for funding?**
    A: Yes, but please speak to how your product fits within the clinical care pathway.

57. **Q: I unfortunately missed the start and guess you talked about the total funding pool available.**
    We are eager to apply but need to be sure our ambitions to broaden our immunomagnetic assay platform beyond our current portfolio match the realities of what it costs to get this done. Ballpark estimate for our best fitting product concept we are looking at perhaps $5 - 8M for 4-6 min Ng pathogen ID onto an adapted platform that is ready for regulatory submission and scale-up.
    This is not including manufacturing process and facilities expansion which I understand is out of scope. We expect to leverage our existing manufacturing infrastructure to fully commercialise.

    I'd like to be clear that this level of funding is not prohibitive so we pitch at a scale that fits the CARB-X mandate.
    A: For Dx, the CARB-X funding caps (I.e. maximum contribution from CARB-X) for Feasibility and Product Development are US$ 5.71 and 8.17 M respectively.

58. **Q: A program may not be invited to submit a Project Narrative because the EOI did not provide sufficient information to judge the merit of the application. What does it mean?**
    A: It means that the application did not provide a) data on *N. gonorrhoeae* specifically, b) data from swabs or urine, or c) if AMR data were provided, no ID data were included.

Technical questions

1. **Q: What is the link to the new portal?**
   A: https://carb-x.force.com/fundingportal/

2. **Q: Can I save the EOI as a draft?**
   A: Yes. Select **Save as Draft**. You will see the message below. Be sure to click **OK.** If you do not click OK, your entire application will be lost.

   Your application will be saved as a Draft. You can return to the My Applications page to resume at any time. Click OK to Save as Draft.

   To resume your application, navigate to **My Applications** on the Portal homepage and click **Resume.**

3. **Q: Can I have a list of the questions and possible responses?**
   A: The questions are outlined on our website: https://carb-x.org/apply/apply-here/
   Responses are not exportable from the EOI at this time. You can use the Save as Draft feature to draft an EOI for review prior to submission.