Catalyze Preclinical Application - Version 12 - 2026.11.09

**PLEASE NOTE: Attachments that are not referenced in the application or that use unclear naming conventions will not be reviewed. Please limit your uploads to only essential documents as our reviewers have a limited time to review many attachments. Make sure all files are clearly labeled and are properly identified.**

**Applicant Last Name:** _____

**Project Title:** _____

**Date of Submission:** _____

## Section 1: Contact Information

***Provide contact information for the principal investigator (PI) of this application. If the PI has designated a representative to submit the proposal on their behalf, please enter the designee's contact information as well.***

1. Project Title: _____
2. Is this a resubmission of a proposal for a project for which support was previously sought under Catalyze? ☐ Yes ☐ No
3. Principal Investigator (Last Name, First Name): _____
4. Organization: _____
5. Title: _____
6. Department (or Discipline): _____
7. Street Address: _____
8. City: _____
9. State: _____
10. Zip code: _____
11. PI email address: _____
12. PI telephone number: _____
13. Name and contact information for corresponding organizational representative, if not the PI: _____
14. How did you learn about Catalyze? (Select all that apply):

☐ NIH/NHLBI website
☐ NHLBI Catalyze website
☐ NIH Translational Program(s)
☐ Catalyze event
☐ My institution/department
☐ My technology transfer office
☐ Scientific conference or news article
☐ NIH Program Officer
☐ Other (Please specify): _____

## Section 2: PI Demographic Profile

***Your responses to the following questions allow the Catalyze Coordinating Center to better understand the demographic profile of investigators interested in Catalyze award programs. Your responses to these questions have no influence on proposal selection and will not be shared with reviewers.***

15. Position or title: _____
16. Terminal Degree: _____
17. Year of Terminal Degree (or Expected Completion Year): _____

18. Has your professional experience to date been characterized by any of the following? Select all that apply:

- ☐ Been granted a copyright, patent, or trademark
- ☐ A patent has been issued
- ☐ Licensed your technology to another party
- ☐ Applied for funding from a translational research, proof-of-concept, or commercialization support program—other than Catalyze
- ☐ Received funding from a translational research, proof-of-concept, or commercialization support program—other than Catalyze
- ☐ Founded a start-up company

## Section 3: Technology Profile

***Provide the following information about the project for which Catalyze assistance is sought.***

19. Disease area (select all that apply):

- ☐ Blood
- ☐ Cardiovascular/Heart
- ☐ Lung
- ☐ Sleep

20. Technology Type (select one):

- ☐ Biologic
- ☐ Drug
- ☐ Combination product
  - Is the combination product with a device? ☐ Yes ☐ No
- ☐ In vitro diagnostic
- ☐ Health information technology
- ☐ Research tool
- ☐ Gene Therapy
- ☐ Cell Therapy
- ☐ Medical device

If medical device or combination product with device:

- Do you have data supporting feasibility? ☐ Yes ☐ No
- Are you in design lock? ☐ Yes ☐ No
- Does this request involve a device with a modification of a product on the market? ☐ Yes ☐ No
- If yes, does the PI own rights to the data and/or product to be changed? ☐ Yes ☐ No

21. What type of support is being requested from the Preclinical Catalyze Program? (select all that apply)

☐ Preclinical Studies (PharmTox/non-GLP/GLP Studies)
Please describe (50-word limit): _____

☐ Chemistry Manufacturing and Controls Work
Please describe (50-word limit): _____

☐ Preclinical Catalyze Coordinating Center Assistance (regulatory guidance and documentation, gap analysis)

Please describe (50-word limit): _____

22. What is the specific technology or product (50-word limit)? _____

23. What is the indication (50-word limit)? _____

24. If the project is for a therapeutic, what is the target (e.g., Kinase, Receptor, Protein, Mechanism of Action) for the product (50-word limit)?

_____

25. In two or three sentences, what is the technical goal of the project (50-word limit)?

_____

26. Indicate the status of intellectual property protection for this technology

☐ No invention disclosure filed with technology transfer office (or equivalent)
☐ Invention disclosure filed with TTO (or equivalent)
☐ A patent application has been submitted
☐ A trademark has been registered
☐ A copyright has been granted
☐ Patent has been issued

For devices (including in vitro diagnostics) and combination products:

Does your device incorporate intellectual property (IP) from another component?
☐ Yes ☐ No ☐ Not Applicable

If yes, do you have the necessary rights or freedom to operate? Please explain.

_____

27. Do you have efficacy data in a relevant animal model by the route of administration to be used in the clinic? Please describe relevant efficacy data in the Project Description below.

☐ Yes ☐ No ☐ Not Applicable ☐ Other (please specify)

28. For device (including in vitro diagnostics), have you confirmed conceptualization and proof of concept via prototyping of all or part of the conceived product with supporting data (i.e., animal or known-sample studies) and documentation? Has a Design History File been created?

☐ Yes ☐ No ☐ Not Applicable ☐ Other (please specify)

29. **Project Description**. In 1,000 words or less, please provide an overall description of your project. Include the project purpose or objective, therapeutic relevance to the NHLBI mission, a description of preliminary studies, a concise description of the studies you are proposing, the unmet market need or innovation to potentially change standard of care, and commercialization path.

_____

30. Explain why support for this project is sought from NHLBI and the Catalyze program as opposed to private sector or other sources of support.

_____

## Section 4: Prior Technology Development Support

***The following questions request information about the funding and translational program support history for the technology to be developed under the proposed project. Please provide information about NIH and non-NIH support. Please also indicate whether the principal investigator and/or the technology have been supported by any NIH translational programs.***

31. Was the discovery phase or any earlier translational stages supported by NIH? If yes, provide the NIH award number, project title, total amount, and award period for each award. (Note: the format of the NIH funding number is R33HLI56279.)

| NIH Award Number | Project Title | Total Award Amount | Award Period |
|---|---|---|---|
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32. Were any earlier translational or product development stages supported by any of the following NIH-sponsored translational programs? (select all that apply):

- ☐ Bioengineering for HLBS
- ☐ CADET II
- ☐ Catalyze - Product Definition
- ☐ Catalyze - Preclinical
- ☐ Catalyze - Regulatory
- ☐ Excellence in Hemoglobinopathies
- ☐ Large Animal Blood Disease Core
- ☐ Molecular Imaging of the Lung
- ☐ NCAI (B-BIC, UC CAI, or NCAI-CC)
- ☐ NIGMS STTR Tech Transfer Hubs (ASCEND, DRIVEN, SHARP Hub, Southeast Xlerator Network)
- ☐ POCTRN (CAPCat)
- ☐ Preclinical GTPR
- ☐ Preclinical SMARTT
- ☐ Pulmonary Vascular-RV Axis
- ☐ REACH 2015 (UofL ExCITE, MN-REACH, or LIBH)
- ☐ REACH 2019 (KYNETIC, MBArC, ROI, CO-SPARK, or WE-REACH)
- ☐ REACH 2023 (CBC HITES, GCC, Mid-South, Rocky Mountain or UM-BILD)
- ☐ SBIR/STTR
- ☐ Thrombotic and Hemostatic Centers
- ☐ tPPG
- ☐ Transformative Platforms
- ☐ VITA
- ☐ None of the above
- ☐ Other (Please provide name of NIH opportunity or program): _____

33. Was the discovery phase or earlier stages of product development supported by any **non-NIH** funders (e.g., other federal agencies, foundations, state/regional programs)? Please provide the funding history. Include the name of the agency (or entity), project title, total award amount, and award period for each source of support.

| Agency | Award Number | Project Title | Total Award Amount | Award Period |
|---|---|---|---|---|
| | | | | |
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34. Please describe any fundraising activities that you have sought over the past 12 months (e.g., Angel investment, pitch presentation, grants, other) including the outcomes (e.g., which activities were successful? Which were unsuccessful?)

35. Please provide documentation of all non-federal funds received in the last 12 months and any non-federal investments contingent on Catalyze support (e.g., redacted bank statement, term sheet, letter of support if funds are contingent on selection in Catalyze).

36. Has the PI or co-PI ever received support (e.g., funding, coaching) from any translational or entrepreneurship program or service, funded by Federal (NIH or other agencies) or non-Federal sources?
Note: this question asks information about the PI and co-PI in general, not the technology for which support from Catalyze is sought.

☐ Yes
If Yes, please describe (50-word limit):

_____

☐ No

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**Supporting Documentation**: You may provide supporting documents for this section. This is optional. Please limit to only key information (e.g. a figure to support a response).

**Appendix. References Cited**

Please provide a list of citations used (i.e., provide only citations without uploading the articles). If you do not have a citation for an article you would like to include, please upload it (preferably in a PDF format)

## Section 5: Basis for the Project

***Please respond to the following questions. Limit responses to no more than 500 words per question, unless otherwise noted.***

37. Background: Describe the scope and nature of the problem the therapeutic, device or diagnostic product will be designed to address and give a brief description of the solution. Ensure detailed technical approach is provided.
    - Please provide sufficient justification for why the product is ready for progression into the preclinical phase. Please review the Checklist for Preclinical Studies and upload relevant documents for your product type. (e.g., a structure analysis, characterization data, initial stability to support the manufacturing process, Certificate of Analysis).

    Please attach supporting figures where applicable, and make sure to reference the figure within your text response.

    _____

38. **Unmet Need**: Clearly state the unmet need being addressed by the technology and provide evidence to support the need from multiple stakeholder perspectives (e.g., patient, clinician, payer). How was the unmet need identified/confirmed (e.g., regulator, voice of customer, stakeholder interviews)? _____

39. **Proposed Project/Solution**: Describe the proposed solution, the setting in which it will be utilized (e.g., ICU, in-patient, out-patient, primary care physician, etc.), the primary patient population, and proposed indication for use. Characterize the expected benefit from the technology and how it will enhance standard of care (current or predicted) and/or replace the current standard of care. What is the evidence to support the expected benefit? Provide a brief synopsis of your preliminary data.

    _____

40. **Market Size**: Define the total and addressable market size and approximate target price of the technology. Support your market size and descriptions with evidence about current technologies or approaches to address this indication. Define a specific patient segment of those suffering from the specific targeted disease. What are the market population trends and projections?

    _____

41. **Competitive Landscape**: Define the competition mix (e.g., companies, products, processes, procedures, substitutes) for the proposed technology. Focus on how the disease will be treated when the technology/product gets to market. Is the landscape shifting?

    _____

42. **Differentiation**: Explain how the proposed technology will compete in the marketplace relative to the cost of your product compared to commercialized competitive technologies. Provide data to support this. If no preliminary data is available, describe what data would be needed to justify the differentiation. Describe how the proposed product is superior to current options/technologies, including those currently in clinical trials.

    _____

43. **Regulatory Path** (if applicable): Describe the expected regulatory pathway and identify which FDA Center(s) will regulate the technology. Describe foreseeable regulatory risks or accelerated programs that could impact the technology development. Comment on the clinical trial considerations and how those might impact the regulatory approach. Please also include information on technologies that are currently in development. If a Target Product Profile has been developed, **please upload the relevant briefing documents and meeting minutes, if available**.

    _____

44. **Regulatory Consultation** (f applicable): Have you sought regulatory advice from foreign regulators, the FDA, legal counsel, or consultants for the proposed technology? If there have been any communications with the regulators, please upload.

    ☐ Yes
    If yes, please describe. _____

    ☐ No

45. **Reimbursement** (if applicable): Define similar product(s)/service(s) that is (are) currently being covered for the indication your technology targets and identify relevant CPT/DRG/APC Codes and their reimbursement rates. If no code exists, how will the technology be paid for by the end user? _____

46. **Intellectual Property**: Describe how the intellectual property (IP) is connected to the commercialization plan. If applicable, describe your interactions with your technology transfer office. Please upload any supporting documentation. _____

    **Supporting Documentation**: You may provide supporting documents for this section. This is optional. Please limit to only key information (e.g. a figure to support a response).

    **Appendix. References Cited**
    Please provide a list of citations used (i.e., provide only citations without uploading the articles). If you do not have a citation for an article you would like to include, please upload it (preferably in a PDF format).

## Section 6: Project Plan and Requested Services

***Please respond to the following questions. Limit responses to no more than 500 words per question.***
***Note 1:*** *The Catalyze program will not support any GLP/GMP requests before a pre-submission meeting. You may request regulatory support for an FDA meeting.*
***Note 2:*** *While the Catalyze program does not enforce a fixed budget cap on applications, in general the program does not support projects above $1,000,000/year, however this can vary depending on product type (e.g., biologics, cell therapy, gene therapy).*

47. Provide a brief outline of your overall project plan in a timeline format in the table below. List all tasks in sequential order, completed and not completed, that will lead to the project goal (e.g., pre-IND/pre-IDE, follow-on funding). Provide the cost and vendor information only for the services you are requesting from the Catalyze Preclinical Program.

    **NOTE: The use of Chinese CROs and CMOs is not supported by the Catalyze Program. Applications that include estimates from Chinese CROs/CMOs will <u>not</u> be reviewed. Additionally, the use of other international vendors will require additional clearance from the State Department which could delay the start of Catalyze services. Please also be aware that the use of foreign vendors may incur additional costs due to tariffs.**

| Task | Start Date | End Date | Cost | Vendor |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
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    Upload a current CRO/CMO quote for the requested services listed in the table.

    Provide any additional project plan comments.

    _____

48. Using the milestone table below, list the milestones associated with the tasks from the above project plan timetable (in the first question within this Section 6). Explain how the requested services relate to your project's milestones and go/no-go decision points to bring your technology to an inflection point for commercial investment or a viable "exit" point.

| Milestone | Go Criteria | No-Go Criteria | Deliverable | Comment |
|---|---|---|---|---|
| | | | | |
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    Provide any additional comments.

    _____

49. If specific studies from the requested services are supported through Catalyze, what is your plan for funding future studies?

_____

50. Define the risks (e.g., legal, scientific, technical, personnel, market, and commercialization) you have identified that may impact product development and specify existing and/or proposed mitigation plans to manage these risks.

_____

51. Provide the institutional affiliation, expertise, and role of all individuals on the project team, including your designated project manager.

| Name | Institutional Affiliation | Expertise | Role |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

52. Describe your staffing strategy (both internal and external team members). For the team proposed in the preceding question, why is this the right talent mix for this project? How does the level of expertise for the team relate to future product development stages?

_____

53. Provide the organization, name, and contact information for your accelerator partner. What role will the accelerator partner play in the proposed project? Please upload a letter of support from the accelerator partner.

    a. Accelerator: _____

    b. Contact name, phone, email, web address: _____

    c. Role in the project, available infrastructure, and facilities (50-word limit): _____

**Supporting Documentation**: You may provide supporting documents for this section. This is optional. Please limit to only key information (e.g. a figure to support a response).

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