

SINGAPORE-CHINA JOINT FLAGSHIP PROJECT CALL FOR PROPOSALS INFORMATION SHEET

24 June 2024 to 23 August 2024

1. Overview

- 1.1 The National Research Foundation of the Republic of Singapore (“NRF”) and the Ministry of Science and Technology of the People's Republic of China (“MOST”) signed an Implementation Agreement on Cooperation in Science, Technology and Innovation in 2019, with an aim to advance bilateral cooperation in technology areas of mutual interest, and building on the Agreement on Cooperation in Science and Technology established in 1992 between the Republic of Singapore and the People's Republic of China.
- 1.2 To implement the cooperation mechanisms described in the Implementation Agreement and to further advance existing cooperation, NRF and MOST are inviting submission of proposals for consideration for joint flagship project(s) on the topic of “Food Resilience”, in the following areas of research:
- (i) Future Foods
 - (ii) Aquaculture
- 1.3 NRF will oversee the management and implementation of the flagship project call, including post-award grant administration and management. Singapore applicants to the joint grant call are to adhere to National Research Fund guidelines as well as terms and conditions.

2. Funding Quantum and Duration

- 2.1 Up to 2 flagship projects may be supported. Each project can be funded at up to S\$3,000,000 (inclusive of 30% indirect costs) for up to 3 years for the Singapore component of the joint project.

3. Eligibility Criteria (for Singapore PI)

- 3.1 Only one Principal Investigator (PI) is allowed per application from the Singapore side. Applicants applying as Principal Investigator are required to fulfil the following criteria at the point of application:
- (i) Hold a full-time¹ primary appointment in the National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore

¹ PI should hold a minimum of 9 months' employment (per calendar year) with the institution.

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University of Technology and Design (SUTD) or A*STAR Research Institute.

- (ii) Be an independent PI with a demonstrated track record of research (e.g. received award of nationally competitive funding or have a substantial publication record) and research project management.
- (iii) Have a laboratory or appropriate research infrastructure to carry out research activities in Singapore.
- (iv) No outstanding reports from other national grants.

3.2 Researchers from other Singapore-based publicly funded institutions can participate as Co-Investigators (Co-I) or collaborators.

3.3 Researchers from private sector and other entities can participate as collaborators.

4. Application Process

4.1 Each application should be a joint project led by a Singapore PI and a collaborating China PI.

4.2 The collaborating teams in Singapore and China would coordinate among themselves to develop a unified and coherent proposal for their collaboration. The Singapore PI should submit the application through the eligible Singapore Host Institution (HI)² to NRF, while the China PI should submit the same application to MOST. Prior to submission to the NRF, the proposal should be verified by the Host Institution's Office of Research (ORE) or its equivalent³ and endorsed by the Director of Research (DOR).

4.3 Both Singapore and China PIs should submit their proposals to NRF and MOST respectively, via the relevant channels (i.e., through the HIs for Singapore PIs). **The deadline for applications to reach NRF is 23 August 2024.** Only submissions received by both NRF and MOST, via the stipulated channels, will be accepted for review (see also Section 5, below). Only projects eventually approved by both NRF and MOST will receive funding.

4.4 Please note that a 'Cooperation or co-application agreement between the proposing organisation and its foreign or overseas partners, letter of intent, or support letter' is a compulsory document to be submitted together with the proposal submission by the China PI to MOST, failing which the proposal will not be considered for evaluation.

5. Restriction on proposal submission quota on Singapore HI

² For this invitation for proposals, eligible Host Institutions are the National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore University of Technology and Design (SUTD) and Agency for Science, Technology and Research (A*STAR)'s Research Institutes.

³ For NUS, this would be the Office of the Deputy President (Research & Technology); for NTU: the NTU Research Support Office; for SUTD: SUTD Research Office; for A*STAR: the A*STAR Research Office.

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5.1 Each eligible Singapore HI will be restricted to **up to three (3) submissions each** to NRF.

5.2 The Singapore PI and China PI should coordinate closely to meet any relevant internal deadlines required by the Singapore HIs and MOST. MOST may have a different deadline for China PIs. Only submissions received by both NRF and MOST, via the stipulated channels, will be accepted for review.

6. Submission of Full Proposal

6.1 The following completed documents in PDF format should be submitted via email to Ms Ong Wei Jing at ong_wei_jing@nrf.gov.sg, and Ms Poh Wei Theng at POH_Wei_Theng@nrf.gov.sg by **23 August 2024, 6pm**.

- (i) Proposal Template (Annex A)
- (ii) Budget Template (Annex B)
- (iii) CV Template (Annex C)
- (iv) Any other supporting documents

6.2 Please refer to the table below for the guide to fill in the Proposal Template (Annex A).

Table 1: Guide for Proposal

Sections Required	Information to be provided
I. Singapore and China Research Team	<ul style="list-style-type: none">• This section is to update relevant information for all Singapore and China team members (PI, Co-Is and Collaborators) participating in the research.• Please ensure that the “% effort within this project” for all Singapore team members (PI, Co-Is and Collaborators) adds up to 100%. Under “% Time within this project”, the PI and Co-Is are expected to commit a proportionate amount of their time in ensuring the success of the project. The time commitment of each team member dedicated to the project will be assessed as part of the evaluation criteria.• The CVs of all Singapore members (PI, all Co-Is and Collaborators) listed must be provided (see Annex C on CV Template)
II. Research Proposal Description (12-page limit)	A. Research Objectives <i>What are you trying to do? Clearly state the problem to be addressed with neither jargon nor acronyms and explain why it is significant.</i>

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	<ul style="list-style-type: none">• This section should clearly articulate the use-inspired objectives and expected outcomes of the programme and how it would contribute towards achieving its objectives. <p>B. Proposed Approach</p> <p><i>What is your approach? How is it done today, who are the leading researchers studying the problem, and what are the limitations of their current approaches? What is the potential for scientific breakthroughs or disruptive innovation arising from your approach? Please provide a competitive scan of existing state-of-the-art developments and compare your proposed technology/system/solution in quantitative terms. Describe previous and ongoing works, and any preliminary results, providing all necessary details that would help support this proposal. Why do you think your proposal will be successful in addressing the problem?</i></p> <ul style="list-style-type: none">• This section should clearly highlight the importance of the problems being addressed, how the work would create new knowledge or advance existing understanding, the novelty of the proposed approach and the potential for this to produce breakthrough work.• Provide key insights into the problems to be solved and the working hypothesis for why the team's approach should succeed.• This section should also be used to highlight the international competitiveness of the work being carried out in terms of scientific merit with mention of existing work being carried out by other teams in Singapore and around the world.• A competitive scan on your proposed technology/ system/solution as compared to existing state-of-the-art developments must be included in this section. Elaborate why your solution is better than global competition, which should also include developments from the industry. <p>C. Programme Plan</p> <p><i>How are financial and human resources organised to accomplish the objective? How coherently do the sub-projects contribute and synergise towards achieving the research objectives? What are the technical risks and how would these be mitigated? Outline the schedule for all phases of the proposed</i></p>
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	<p><i>programme – a Gantt chart can be attached as an annex.</i></p> <ul style="list-style-type: none">• This section should provide an overview of the proposed management structure, governance and plans to increase the likelihood of success in achieving its objectives.• Details on identified risks or potential pitfalls that may be encountered and their risk mitigation strategies should be provided.• A Gantt chart depicting the estimated progress of the projects (Sub-project 1, Sub-project 2 etc.) against the timeline (Year 1, Year 2 etc.) of the programme can be included.
	<p>D. Role of team members</p> <p><i>What are the roles and contributions of the Co-Is and collaborators? Briefly describe the plans for interaction among the team member(s) and collaborator(s) in achieving the research objectives. What are the track records and capabilities of the PI and Co-Is, which are relevant to the research programme? How are the collaborator(s) augmentative and relevant to the research programme?</i></p> <ul style="list-style-type: none">• This section should highlight the relevant track record, expertise, capabilities, experience, international standing and competitive advantages of each of the team members. Articulate why you have the best team to execute the proposed research and achieve the programme’s objectives.• The team should use this section to describe plans to leverage on collaborations (local/international) and articulate the value of such collaborations to the programme.• The team should mention in the proposal their working relationship with their collaborators, including details of past collaborations.
	<p>E. Outcomes & Deliverables</p> <p><i>What are the scientific milestones/ metrics that can be used to appropriately measure success at mid-term review and at completion of the program against the stated research objectives? Be quantitative if possible (e.g.: a 2X improvement, or a specific achievement). Explain what impact success of the project would be for the economy and/or society, and how it would generate value for</i></p>

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	<p><i>Singapore. Propose the Key Performance Indicators (KPIs)/Tracking Indicators (e.g. transformation of process/practice, No. of publications in top 10% journals, no. of patent applications etc.)</i></p> <ul style="list-style-type: none"> • The team should provide the following: <ol style="list-style-type: none"> 1) An impact statement. The impact of the research to Singapore, if it succeeds, must be articulated here. 2) The pathway to impact. This should be a clear description (in non-technical term) on how your team seeks to achieve this impact. 3) Key deliverables (at mid-term and at completion) that can be expected from the successful execution of the programme. The deliverables should be quantitative if possible – e.g. a 2x improvement, or a specific achievement, or a new concept, etc., to be measured at the mid-term mark and programme completion mark. These key deliverables are not output indicators (e.g. number of paper/conference publications, no. of post-docs hired etc.) 4) Key Performance Indicators (KPIs)/Tracking Indicators relevant to the thrust of the project (e.g. transformation of process/practice, No. of publications in top 10% journals, no. of patent applications etc.)
<p>III. Budget</p>	<ul style="list-style-type: none"> • Provide a summary of the requested budget in this section. The total requested budget should reflect a realistic estimation of the project needs and be fully justified. The overall level of the grant offered will be determined on the basis of the needs and judged by the peer reviewers and evaluation panel against the requested budget. • The team should use the budget template (Annex B) to provide the detailed breakdown of the budget over the three-year period. The budget categories applicable are: (i) Expenditure on manpower (EOM); (ii) Other operating expenses (OOE); (iii) Equipment (EQP); and (iv) Overseas travel (OT).
<p>IV. Other Funding Support</p>	<ul style="list-style-type: none"> • Details of all grants currently held or being applied for by the PI and all Co-Is who are expected to receive funding from NRF under the proposed programme, in related areas of work, must be declared in this section.

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V. International Peer Reviewer Recommendations	<ul style="list-style-type: none">• The PI should provide at least three(3) international peer reviewer recommendations for this proposal.
VI. Declaration by applicants (Singapore research team)	<ul style="list-style-type: none">• The PI and all Co-Is should complete the declaration section.
VII. Endorsement by Host Institution	<ul style="list-style-type: none">• This proposal submission should be endorsed by the Director of Research (DOR) of the Host Institution.

7. Proposal Review Process and Evaluation Criteria

7.1 Each proposal will be evaluated based on:

- (i) Scientific excellence of proposed research
- (ii) Potential impact / Relevance to Singapore* (*for MOST, the criterion will need to be related to China)
- (iii) Project structure, management and budget
- (iv) Technical competencies and synergy between the partners
- (v) Fit of the proposal to the grant call topic

7.2 Each Full Proposal will be reviewed by international peer reviewers identified by NRF, and an Evaluation Panel convened by NRF.

8 Estimated timeline for Flagship Project selection

8.1 The indicative timeline for project selection is as follows:

S/N	Activity	Date
1.	Launch of Joint Flagship Project Proposal Call	24 June 2024
2.	Deadline for Proposal Submission to NRF	23 August 2024
3.	Announcement of Awards	Expected November 2024

9 Contact Information

9.1 For enquiries, please contact Ms Ong Wei Jing at ong_wei_jing@nrf.gov.sg or Ms Poh Wei Theng at POH_Wei_Theng@nrf.gov.sg. For enquiries related to China's call details, please contact Ms Zhong Wenyan (zhongwy@most.cn).