**PROPOSAL FOR PROGRAMMATIC FUNDS**

**(MTC DOMAIN)**

Please do not exceed 10 pages (excluding Annexes). Sections I, II, XII and XIII may be excluded from the page count, while Sections III, X and XI may be included as Annexes.

Please use Font: Arial 10 pt, Single spacing for your text

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| **SECTION** | **DESCRIPTION** |
| **I.** | **DESCRIPTIVE TITLE AND EXECUTIVE SUMMARY**  |
| **II.** | **DETAILS OF TEAM MEMBERS (LEAD PI, TEAM PI(S), CO-I(S) AND COLLABORATOR(S))** |
| **III.** | **REPORT FOR PREVIOUS PHASE OF FUNDING (IF APPLICABLE)**  |
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| **XIII.** | **DECLARATION FROM HEAD(S) OF HOST INSTITUTION(S)** |

Kindly submit application to:

programmatic\_ame@hq.a-star.edu.sg

**Important:**

**All information is treated in confidence and used only for the purposes of the grant.**

1. **DESCRIPTIVE TITLE AND EXECUTIVE SUMMARY**
* Proposed title of programmatic programme.
* Executive Summary: List specific aims, hypotheses, methodology, potential applications/exploitations, novelty/innovative factors, budget needs and funding period.
1. **DETAILS OF TEAM MEMBERS (Lead PI, Team PIs, CO-Is and Collaborators)**
	* Insert details of each team member in the table below. If required, please insert additional rows.
* The Lead PI will be the overall lead in the conduct of the Research from the Host Institution. Lead PI will be responsible for coordinating research activities carried by research team and all progress reporting of the programme, on behalf of the research team.
* The Team PI(s) will be the representative leading the conduct of the Research at the Partner Institution.
* The Co-I(s) will be the Research personnel identified as Co-Investigators from either the Host or Partner Institution.
* Collaborator(s) refers to any company, institution, incorporated body or other industry or academic collaborator, who are engaged in the research in collaboration with the Lead PI, Team PIs or Co-Is.

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| **Lead PI:**Overall Lead from Host Institution(Title, name and research institution, email address and contact no.)  |  |
| **Team PI(s):**Representative from Partner Institution(s)(Title, name and research institution, email address and contact no.)  |  |
| **CO- I(s):**Other researchers from Host and Partner Institutions(Title, name and research institution, email address and contact no.)  |  |
| **COLLABORATOR:**(Title, name and affiliation, email address and contact no.)  |  |

1. **REPORT FOR PREVIOUS PHASE OF FUNDING (IF APPLICABLE)**
* Please provide a short summary of the programme to date as an Annex to the proposal.
* Elaborate on the achievements made during the previous phases of funding (including milestones achieved by the programme).
* Include a summary of the budget awarded and the utilization (to-date).
* Please restrict this section to not more than 5 pages.
1. **KEY OBJECTIVES AND DESCRIPTION OF PROPOSED PROGRAMME**
* Please include an abstract of the proposed programme.
* Then, provide a detailed description of the following:
	+ Aim, key objectives and desired outcome(s).
	+ Challenges to be addressed.
	+ Novelty and innovativeness of the proposed idea(s) or concept(s).
	+ Hypotheses and research methodology.
	+ Comparative advantage of the proposed approach.
* Please clearly articulate (i) which MTC domain area does the proposal falls under and (ii) how the proposal aim to address the challenges and needs of the MTC domain, and the pathway towards commercialization in Singapore (<https://www.nrf.gov.sg/rie2025-plan/manufacturing-trade-and-connectivity>). Refer to Annex A on the website for the MTC Focus areas.
1. **SIGNIFICANCE AND POTENTIAL IMPACT OF PROGRAMME**
* Articulate how the programme can develop new and emerging capabilities that are relevant to existing industrial sector(s) or seed new growth sectors through building scientific peaks of excellence to deliver significant impact, beyond a 5-year timeframe.
* Address the global competitive landscape, and explain how the programme will set Singapore apart from its competitors.
1. **IMPLEMENTATION PLAN**
* Briefly describe each team member’s research background and technical competencies that are relevant to the programme, as well as roles and contributions to the programme.
* Describe the plans for interaction among the team members as well as engaging research groups in Singapore with complementary capabilities and expertise in achieving the research objectives.
1. **BUDGET REQUEST**
2. **Overall budget**
* Please indicate the overall funding required including the breakdown on budget requirement for manpower, consumables and equipment in the table provided below. Please also replicate the table for further breakdown according to each institutions involved in the programme. The following guidelines are to be used in the computation of the budgets.
* **Manpower (EOM):**
	+ Funding of EOM should comply with the Host Institution(s)’s prevailing and consistently applied human resource guidelines.
	+ Effective 1 Apr 2023, A\*STAR PIs and Co-Is are no longer allowed to charge their EOM to the project.
* **Research Scholarship (RS)**
* Purpose of the research scholarship should be directly relevant to the Research and necessary to accomplish the Research objectives.
* Postgraduate stipend must align with the prevailing rates and guidelines set by the Ministry of Education, and only subsidised tuition fees and stipends are supportable under RS.
* All expenses budgeted under the RS should not attract indirect costs
* **Overseas Travel:**

Travel cost should only be used for purposes specific to this programme.

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| Manpower (EOM) | **Qualifications** | **No.** | Year 1($) | Year 2($) | Year 3($) | Total ($) |
| *Postdoctoral Fellow* |  |  |  |  |  |  |
| *Research Assistant* |  |  |  |  |  |  |
| *Laboratory Technician* |  |  |  |  |  |  |
| *Others* *(Pls specify)* |  |  |  |  |  |  |
| EOM Subtotal |  |  |  |  |
| Equipment (please list) | No. | Year 1($) | Year 2($) | Year 3($) | Total ($) |
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| Equipment Subtotal |  |  |  |  |
| Other Operating Expenses (OOE) |  | Year 1($) | Year 2($) | Year 3($) | Total ($) |
| Materials & Consumables |  |  |  |  |
| Animal Cost (if applicable) |  |  |  |  |
| Others (pls state) |  |  |  |  |
| OOE Subtotal |  |  |  |  |
| Overseas Travel  | No. | Year 1($) | Year 2($) | Year 3($) | Total ($) |
| Overseas Travel (Includes overseas conference travel & overseas travel for purposes directly related to the research project) |  |  |  |  |  |
| Overseas Travel Subtotal |  |  |  |  |
| Total (Direct costs) |  |  |  |  |
| Overheads costs (30% of direct costs) |  |  |  |  |
| Research Scholarship  | Year 1($) | Year 2($) | Year 3($) | Total ($) |
| Research Scholarship (Direct cost only) |  |  |  |  |
| GRAND TOTAL |  |  |  |  |

1. **Justifications (where relevant):**
* **Animal Cost**

Please provide a breakdown on the proposed animal cost e.g., number of mice and/or cages.

* **Equipment**

For each piece of equipment ≥ SGD100,000, please justify the proposed purchase/ quotation.

1. **DECLARATION OF ETHICS APPROVAL**
* The approval of the grant is subject to ethics approval. Please state if your study involves the following ethics categories and attach the ethics approval documentation, if applicable.

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| **Ethics Category** | **Involve?***(Y/N)* | **Please declare the participating institutions where study requiring ethics approval is conducted** |
| Human Subject |  |  |
| Use of Human Tissues or Cells from Primary Donors (i.e. subject / volunteers recruited for project) |  |  |
| Use of Commercially Available Human/Animal Tissues or Cells |  |  |
| Animal Experimentation |  |  |
| Requirement for Containment |  |  |
| Multi-centre Trial(s)(if yes, please state all participating institutions / centres: \_\_\_\_\_\_\_\_) |  |  |

1. **MILESTONES AND DELIVERABLES**
* Propose the key deliverables and desired end outcomes that the programme aims to achieve within the period of funding.
* PI to report outcomes during annual progress report, mid-term reviews and final report.

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| **Key Performance Indicators (KPIs)/ Tracking Indicators (TIs)** | **Indicators** | **Total Capability Indicators** |
| KPI | No. of publications in the top 10% most highly cited journals |  |
| KPI | Number of unique conference abstracts accepted for oral presentations at top conferences |  |
| TI | No. of patent applications |  |
| TI | No. of patents granted |  |

* Propose detailed and quantifiable scientific milestones for the programme. These will be used to assess the progress of the programme, which will be taken into consideration for continued disbursements of funds.

 *\*Shaded box represents end date. Please refer to “milestone and benchmark setting” guideline on the website*

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| **Research****Milestones/****Deliverables** | **Year 1** | **Year 2** | **Year 3** |
| **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** |
| **Milestone 1****(Start date)** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Milestone 2****(Start date)** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Etc.** |  |  |  |  |  |  |  |  |  |  |  |  |
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1. **OTHER FUNDING SUPPORT**

**Support from any industry partner(s), if applicable**

* Provide details on the funding or other resources provided by any participating industry partner(s), where applicable, for this programme.

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| **Items Supported** | **Funding Source** | **Amount of Fund ($)** | **Support Period (Year)** |
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**Grant Support**

* List all currently held or applied grants by the team member(s) that are related to this programme. These include those supported by / applied to A\*STAR, NMRC, Universities and other public funding agencies. Kindly attach the scientific abstract of each grant listed below for reference. Please also provide a brief explanation on how the scope of research under each grant (including this application) is different / relates to one another.

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| **Title of Research** | **Funding Agency** | **Amount of Fund** | **Support Period (Year)** | **Expiry Date of the grant** |
| **Approved/ Received ($)** | **Balance Available ($)** |
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* Please declare that we (the applicants) do not have any conflict of interest with the industry partners (company(s) and company executives) as listed in this proposal.
1. **CURRICULUM VITAE**

In no more than 2 pages per PI / Co-I, please **provide only the following required information** in the following format:

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| Salutation & Name |  |
| Current Appointment(s) & Institution Affliation(s) | (Please provide full details, e.g. joint appointments; other academic appointments including those outside of Singapore) |
| Percentage of time spent every year | Public Institution 1: X%Public Institution 2: Y%Overseas Appointment: Z%(where X+Y+Z = 100%) |
| Latest publications in the area described in this project (list up to 10) | 1. Author; Title; Journal/Publication; Volume/Page/Date
2. Author; Title; Journal/Publication; Volume/Page/Date
3. Author; Title; Journal/Publication; Volume/Page/Date
4. Author; Title; Journal/Publication; Volume/Page/Date
5. Author; Title; Journal/Publication; Volume/Page/Date
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7. Author; Title; Journal/Publication; Volume/Page/Date
8. Author; Title; Journal/Publication; Volume/Page/Date
9. Author; Title; Journal/Publication; Volume/Page/Date
10. Author; Title; Journal/Publication; Volume/Page/Date
 |
| Other key research achievements (e.g. patents, licenses, awards, spin-off companies, external consultancy etc.) |  |

1. **DECLARATION FROM LEAD PI, TEAM PI(S) AND CO-I(S)**

I, the undersigned, declare that:

1. all information is accurate and to the best of my knowledge; and
2. similar versions or part(s) of this proposal have not been sent to other agencies for funding.

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Lead PI, Team PI(s) and Co-I(s) Signature, Name and Date

1. **DECLARATION FROM HEAD(S) OF HOST INSTITUTION(S)**

It is certified that:

the Institution agrees to participate in this programme;

the Institution shall provide necessary facilities for implementing the programme; and

the Institution assumes financial and other management responsibilities for the duration of the programme to be carried out at their institution.

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Head of Host Institution Signature, Name and Date