MINISTRY OF EDUCATION
ACADEMIC RESEARCH FUND
TIER 1

Application Guidelines

and

Programme Terms & Conditions

for

Administrators

and Principal Investigators (PIs)

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1. Introduction

1.1. Objectives of the MOE Academic Research Fund (AcRF) Tier 1 Programme:

(a) Strengthen NUS' capability to perform high quality research and compete for external grants.

(b) Groom young faculty to build up their research portfolio and prepare them to compete effectively for external grants.

(c) Support a broad base of research to meet NUS' academic mission, build up capacity for interdisciplinary research and bolster Singapore's economic and social resilience.

(d) Strategically shape and seed new research directions that will lay the groundwork for NUS to respond to, and even influence, the evolving research landscape and to take advantage of external grant opportunities when these become available.

1.2. The Programme functions through the individual awarding practices at Faculty-/School-levels and grants are awarded on a competitive basis within each unit. The Faculty Research Committee (FRC) in each Faculty/School oversees the evaluation, selection and management of the scheme within the guidelines set by the Office of the Deputy President (Research & Technology) (ODPRT).

1.3. The FRC approves proposals for the following purposes, subject to the maximum total project value (TPV) of the respective discipline clusters:

- New research projects
- Supplementation (increase in TPV) for existing projects[1]

1.4. Budgets allocated to STEM (Science, Technology, Engineering and Mathematics) and Social Sciences and Humanities (SSH) disciplines are non-fungible. Interdisciplinary research at the intersection between STEM and SSH may draw on either source of funding.

The supportable quantum for each proposal submitted under the respective disciplines over a 3-year duration is as follows:

(a) STEM: Total Project Value (TPV) of **no more than** S$250,000;

(b) SSH: Total Project Value (TPV) of **no more than** S$180,000;

(c) Interdisciplinary research at the intersection between STEM and SSH: Total Project Value (TPV) of **up to S$250,000**.

The categorisation of disciplines/sub-disciplines into the two clusters is shown in ***Annex C1***.

[1] A new application, detailing the explained scope or additional work to be done, must be submitted for all requests for grant supplementation.

1.5. Research proposals are evaluated based on the following criteria:

- The excellence of the proposed project and track record of the Principal Investigator (PI). Lowest priority is given to established staff working in areas where funding is readily available elsewhere as they are expected to seek research funding from external grantors (which includes MOE Tier 2, Tier 3 or Social Sciences Research Thematic Grant funding);
- Priority to bridge funding to maintain key research personnel for up to 1 year whilst the PI re-submit an external grant application that has narrowly failed to achieve funding;
- Research project proposals that drive strategic initiatives of the Faculty/School;
- Priority to proposals that show promise for future external funding of higher quantum such as MOE AcRF Tier 2 and 3;
- Priority to areas of excellence that lack appropriate external funding agencies. These areas are established based on the trends of the field or discipline and current situation or projected tendency of external funding. Among the top considerations are areas of national interest and/or unique to Singapore and/or Asia; and, niche or potential areas that may attract future significant investments by government or industry.

2. Eligibility criteria

2.1. PI and Co-Investigators (co-PI) must be full-time[2] tenure-track faculty staff. Full time staff on Educator Track[3] [Lecturers, Senior Lecturers and Associate Professors (Educator Track)], Practice Track and Research Track (tenured only) are also eligible to apply.

2.2. The following staff are not eligible to be PI or co-PI except by approval from ODPRT on a case-by-case basis:

- Research Track (e.g. Research Professor, Research Associate Professor, Research Assistant Professor and Research staff such as Senior Research Fellows); and
- Staff of University-level Research Institutes/Centres (RIC) or Research Centres of Excellence (RCE) (including those with joint appointments where the primary host is a RIC/RCE).

2.3. Faculty shall ensure that the PI continues to satisfy the eligibility criteria as stipulated in Paragraph 2.1 throughout the grant duration for continued fund.

2.4. PI who have applied for extended leave/no pay leave (NPL)/sabbatical, must complete the Declaration/Checklist (check-list-for-handing-over-project-with-resignation-of-PI.docx) for academic staff leaving NUS service or going on long leave and submit the form as soon as practicable, through HOD and VDR, to ODPRT.

[2] Defined by a minimum appointed period of 9 months per year or appointment ratio of at least 75% with NUS.

[3]Please refer to OHR's circular on Educator Track Scheme: https://share.nus.edu.sg/corporate/policies/hr2/employment-terms/educator-track-scheme.pdf

3. Application, Award and Project Account Activation

Application Procedure & Package

3.1. The AcRF Tier 1 Grant Call is administrated at Faculty-level. Researchers who are interested to apply should contact the respective Dean or Vice Dean (Research) (VDR) office for further details on frequency and call schedules.

3.2. All proposals must be submitted using the stipulated application form https://nusu.sharepoint.com/:f:/r/sites/corporate/forms/research/03-MOE/Tier-1/02_Application_Form_and_Budget_Phasing?csf=1&web=1&e=caPgni).

3.3. The completed application package should contain the following:

- Research Compliances and Resources form https://nusu.sharepoint.com/:f:/r/sites/corporate/forms/research/16-iRIMS-Training_and_Guides/Sponsored_Projects(SP)?csf=1&web=1&e=HKuGIq; and
- Annexes (supporting documents, e.g. CVs of team members; quotations, etc)

3.4. Applicants should refer closely to ***Annex A: AcRF Tier 1 Fundable/Non- Fundable Items Guidelines*** during budget preparation.

3.5. Applicants should not send similar versions or part(s) of the current AcRF proposal application to other agencies for funding.

Award and Account Activation

3.6. FRC has to submit the list of applications (with details of project title, grant amount, start & end date of project, discipline cluster) received and the proposals selected for Tier 1 funding to ODPRT for endorsement prior to account creation.

3.7. Research project accounts for proposals selected for funding must be created and full project funds committed by mid-February[4], before the end of the Financial Year (FY). Any untilised and uncommitted funds would lapse.

3.8. The project start date must fall within the FY of the budget allocation.

3.9. Where applicable, the PI has to obtain full ethics approval and any other research-related approvals (such as risk assessments) from the relevant authorities. The FRC should refer to the completed Research Compliance and Resources Form and ascertain that the necessary approvals are in place before account activation. More information on the respective research

compliances can be found at https://staffportal.nus.edu.sg/staffportal/research/apply/prepare-proposal-iv.html.

[4]Please refer to the budget allocation notice sent to the Dean for the specific cut-off date.

In the event that the ethics and other research-related approvals are withdrawn or suspended, affected PI must inform the FRC immediately. Continuation of funding will be contingent on the reinstatement of the relevant compliance approvals.

3.10. NUS has implemented an **Annual Blanket Clinical Trial Insurance Policy** for trials/ research/ studies involving human subjects conducted by NUS (*Refer to Circular OFN/2016/004*). Researchers or Faculty are required to contact the following parties to declare and register such research work for insurance purposes:

a. Researchers from NUS except those listed under (b): ODPRT (**Attn:** dprcct@nus.edu.sg)

b. Researchers from Yong Loo Lin School of Medicine, Faculty of Dentistry, Saw Swee Hock School of Public Health and the Clinical Imaging Research Centre (CIRC): to contact NUHS directly for further details about this policy.

3.11. PI shall inform the FRC if scientific work on the research is unable to commence within 3 (three) months from the project start date.

3.12. PI applying for this funding must declare any outstanding final reports for their grants as at the date of application. Each declaration must be made in the application form and endorsed by the Faculty's VDR office. PIs with outstanding final report will only be allowed to apply for grants after they have submitted the required report.

4. Regulation on Use of Awarded Grant

4.1. Use of funds is subject to AcRF Tier 1 Programme Terms & Conditions and NUS prevailing guidelines, policies and procedures.

4.2. The funds or any part thereof shall not be channeled to fund research and development activities overseas i.e. must be conducted in Singapore[5]. No part of the grant shall be:

- Spent by any research team members on research conducted overseas; and/or,
- Sub-awarded, sub-contracted or transferred to local/overseas collaborators[6].

4.3. PI shall use reasonable efforts to employ or otherwise engage research staff (e.g. research fellow, research assistant, etc) who are Singapore Citizens or Singapore Permanent Residents to comply with MOM's Tripartite Guidelines on Fair Employment Practices.

[5]Exceptions may be made to fund overseas field trips required to gather samples, materials or raw data for the performance of the research.

[6]Example, in cases where overseas collaborator(s) has been tasked to undertake part of the research activities.

4.4. Researchers engaged in research that require access to and use of data are reminded to adhere to the *Research Data Management Policy* and all related circulars and advisories published at https://www.nus.edu.sg/research/research-integrity-and-ethics/research-data-management .

4.5. Retrospective variation request will not be allowed, unless there is compelling justification. Such justification must be clearly presented and assessed by FRC. The requests should be documented in the monthly variation report to ODPRT.

Procurement

4.6. Services rendered and/or goods procured must be delivered and received in good order or rendered satisfactory during project period to qualify for funding support, in contributing to the research.

4.7. Invoices for all claims must be dated before project end date.

4.8. Prior approval must be sought from the relevant approving authority for the procurement/ purchase of items/services not previously budgeted for before the expenses are incurred.

4.9. PI must refer to the NUS Procurement Policy (https://nusu.sharepoint.com/sites/proctor/Shared%20Documents/University%20Procurement%20Policy%20(UPP).pdf) and adhere to the University Procurement procedures.

5. Changes/Amendments to Project (Project Management/Change Requests)

5.1. PI should submit all project change requests using the appropriate form:

Type of Variation	Form
Project Amendments *(change in project scope, amendment to project duration or start and end dates of a project, termination of project)*	RGF1
Grant Variation *(changes to budget within/across categories)*	RGF2

5.2. Please refer to ***Annex B: Tier 1 Guide for Processing Variation Requests*** while preparing such requests to ensure that applications are complete and the necessary supporting documents have been provided, to avoid delays in processing.

5.3. All extension requests shall reach the approving authority before the last three (3) months of the original end of the project. The total project duration including the extended period shall not exceed 4 (four) years from the original start date.

5.4. No additional funding will be granted and PI must ensure that there is sufficient budget to support the activities during the extended period.

5.5. The FRC/VDR should evaluate PI's requests based on the key considerations and checks listed in ***Annex B: Tier 1 Guide for Processing Variation Requests***, and provide a written recommendation of support.

5.6. PI is delegated the authority to decide on manpower changes (i.e. increase/decrease in headcount, change in designation or scheme of hires, change in time commitment to the grant), as long as the changes are necessary for the Research, comply with the NUS' policies and does not exceed the EOM vote.

5.7. Changes within the Equipment (i.e. changes in quantity and changes in equipment) or OOE votes (i.e. changes in quantity and changes in OOE items), provided that these changes are (i) necessary, relevant and used for the Research; (ii) do not constitute a change in Research; and (iii) are kept within the approved equipment or OOE vote budget, have to be approved by FRC/VDR.

5.8. It is the responsibility of the PIs/Faculty/School to ensure that all travel expenses are in line with the NUS travel policy. All travel undertaken and funded from the grant must be in relation to the Research only and for no other purpose. Virement of funds into Overseas Travel (OT) is not allowed.

5.9. PIs who have outstanding Tier 1 annual/final report(s) will be denied any grant variation or extension. Applications will be reviewed only after PI has submitted the outstanding report(s).

5.10. A monthly update of all project changes/amendments approved by FRC/VDR shall be submitted to ODPRT by the first week of the following month.

6. Research Output & Publications

6.1. All publications supported by Tier 1 should be made publicly available no later than 12 months after the official date of publication. All publications must acknowledge the funding support provided by MOE and, where appropriate, the scientific and other contributions of the other Institutions and Research Personnel in accordance with established norms.

The acknowledgement statement should follow:

"This research / project is supported by the Ministry of Education, Singapore, under the Academic Research Fund Tier 1 (FY20xx)."

6.2. It is the PI and research team's responsibility to ensure that the protection of any Intellectual Property (IP) is not compromised as a result of the publication of the research

project. Please refer to NUS' Policies Relating to University Intellectual Property at: https://share.nus.edu.sg/corporate/forms/research/NUS_IP_Policy(July2013).pdf.

7. Closure of Project Account

7.1. All projects are expected to be completed within 4 (four) years from the original start date of the project.

7.2. Payments to vendors/suppliers and/or pending claims for approved expenses incurred during the project duration must be submitted to OFN within 2 (two) months of the project end date. The project account will be closed 3 (three) months from the project end date, after which, no further claims or payments can be posted to the defunct project account.

7.3. Faculty/School must work closely with PI to see to the finalisation of project statement of accounts and timely closure of research project accounts 3 (three) months from the project end date.

7.4. Refer to Paragraph 2.4 in the event that the grant is terminated or closed due to PI leaving service. All project accounts must be closed or transferred to a new PI before the last month of service.

7.5. During the project winding down period, PI and Faculty/School shall endeavor to minimize expenses and see to the satisfactory conclusion of the project.

8. Project-Level Performance Management

Annual Progress Report (APR)

8.1. PI is to submit an Annual Progress Report (APR) using the ***AcRF Tier 1 – RGF4 Annual Progress Report*** form.

8.2. PI with outstanding Tier 1 APR may be penalized with the following, until it is submitted or as advised by the Approving Authority:

- have their current AcRF grants suspended;
- denied any grant variation or extension; and/or
- denied funding approval/support for new AcRF proposals submitted.

8.3. The APR which reports on the activities in the FY, shall be submitted to the Faculty/School each year. The first Annual Progress Report for projects that started less than **6 (six)** months before the end of the FY will only be due at the end of the next FY. The following table illustrates:

Project Start/End Dates	Duration from Project Start Date to end of FY (31 Mar 20xx)	Annual/Final Progress Report Due Date
1 December 2021/ 30 November 2024	4 months (31 March 2022)	30 April 2023 (Annual) 30 April 2024 (Annual) 29 February 2025 (Final)
1 October 2022/ 30 September 2025	6 months (31 March 2023)	30 April 2023 (Annual) 30 April 2024 (Annual) 31 December 2025 (Final)
1 June 2023/ 31 May 2026	10 months (31 March 2024)	30 April 2024 (Annual) 30 April 2025 (Annual) 31 August 2026 (Final)

8.4. Faculty/School shall set the due date for the researchers to submit the APR. A copy of the report shall be submitted to ODPRT for records. Faculty/School is also required to provide an update of the project progress to ODPRT. This will be provided during the annual call for progress report exercise. The reports should be submitted to ODPRT by 31 July annually.

Final Report (FR)

8.5. PIs are to submit their Final Reports to the Faculty/School within 3 (three) months from the project completion, along with any other requested materials, using the ***AcRF Tier 1-RGF 5 Final Report*** form.

8.6. If the project is terminated prematurely, PI shall be given up to 3 months to wind down the project. The actual effective date shall be communicated by Faculty/School to the PI. For such cases, the Final Report shall be submitted to the Faculty/School within 3 (three) months from the end of the winding down period. If the project is terminated prematurely due to PI's resignation, the final report shall be submitted to the FRC before PI's last physical day in NUS.

8.7. A softcopy of the endorsed RGF5 form shall be submitted to ODPRT within 4 months from project completion date or end of winding down period.

8.8. PI who fail to submit the Final Report within the stipulated timeline will be debarred. Debarred PI will not be eligible to submit new grant applications for a minimum of 1 year starting from the end of the stipulated deadline. The period of ineligibility will continue until the Final Report is submitted to Faculty/School.

9. MOE AcRF Tier 1 Programme-Level Reporting

9.1. An annual institutional-level qualitative report for Tier 1 is required by MOE, which is to track and measure performance against the stated objectives. ODPRT will contact the

respective Faculties/Schools by mid-September each year to advise on the information required for the report.

10. General Guidelines

10.1. ODPRT reserves the right to change, including without limitation, modify, delete or replace the information and materials set out in this document unilaterally. ODPRT shall notify the Faculties/Schools in writing, enclosing the revised terms and conditions, accordingly.

10.2. In the event of non-compliance of this administrative guidelines, the Faculty/School and/or ODPRT reserve the right to:

(a) withhold or withdraw the current funding;
(b) disqualify the PI from subsequent AcRF funding; and/or,
(c) carry-out any action deem appropriate.

10.3 In addition, MOE may terminate, suspend, withhold or claw back, in part or in full, the funding upon the occurrence of any of the following events:

(a) Breach of ethics in the conduct of research including, but not limited to, ethical rules on patient safety;
(b) Any research misconduct;
(c) Any corruption, misrepresentation, fraud, or misuse of funds; and
(d) Any non-compliance with all relevant current laws, government rules and regulations and other applicable guidelines.

Annex A: AcRF Tier 1 Fundable/Non- Fundable Items Guidelines

Type of Expenses	Description
EOM Related Expenses	
General policy	The general principle is that grants should support EOM costs and related benefits (as per employment contract) as long as it is in line with NUS' HR policies. This will extend to NUS' policies that govern staff recruitment and related costs (e.g. costs associated with the onboarding of staff, staff insurance, overtime claims, staff relocation, employment benefits, employment levy, employment pass, pre-examination medical check- up and housing allowance.) All Manpower related costs that fall under Other Operating Costs (OOE) should be accurately reflected in the Budget. As a general principle, staff costs should be charged based on time commitment to the Research.
Salaries of Lead PI / Investigators / Visiting Professors & researchers/ Collaborators/ general administrative support staff and related expenses	**Not** allowed.

OOE Related Expenses	
General policy	**Not** allowable for expenses that are **not** directly related to the Research. All procurement of such items must be made according to the formal established and consistently applied policies of NUS.
Audit fees	**Not** allowed. This includes both internal and external audit fees.
Bank charges	Allowed as long as it is specifically related to the payments for approved consumables and equipment used in the project.
Books and specialised journals relevant to the research	Books or lab manuals are allowed only if these are directly related to the project. Specialised journals are allowed only if these are directly related to the project and are **not** available in the university's libraries. The funding for journal subscription would be restricted to the duration of the project.
Customs and import duties	Allowed as long as it is specifically related to importation of approved consumables and equipment used in the project.
Engagement of overseas parties/agencies for collation of data	**Not** allowed unless specifically approved by ODPRT. Applications for consideration shall be accompanied by strong justification for the need to engage an overseas-based party to assist with selected project tasks, including reason(s) why the same task cannot be completed by a local team member/student. All requests shall detail the type of payment, duration of work, work deliverable, etc , as well as, a recent quotation(s) from the agency(ies) providing the service.
Entertainment & refreshment	**Not** allowed.
Expenses on overheads - rental, utilities, telephone charges, facilities management, etc	**Not** allowed. AcRF Tier 1 funds cannot be used to fund IRC. This includes IRC levied by collaborators/research partners.
Fines and penalties	**Not** allowed.
Insurance premiums	**Not** allowed. Refer to NUS' policy/information on NUS General Insurance Programme and staff insurance. NUS provides insurance coverage to eligible staff members, subject to their terms of appointment and existing underwriting conditions imposed by the insurance companies.
Lab safety training and related expenses	Allowed, provided PI has checked with the Office of Safety, Health & Environment (OSHE) to ensure that such training is not covered by the Faculty/NUS. PI should also provide justification for the training budget.

Legal fees	**Not** allowed.
License fees and Occupational Health Services	Allowed if license is specifically required before the research work can commence/proceed, and/or to meet statutory/regulatory requirement. Allowed if Occupational Health Services are deemed necessary to comply with statutory and NUS requirements for fitness to work, protection and monitoring of the health of staff/students during the course of the research (such as costs of medical examinations and certifications, mandatory health surveillance, vaccinations, investigations and other medical consultations, etc.).
Patent application, IP related and commercialization expenses	**Not** allowed. This includes patent application filing, and other related cost. Requests and applications should be channeled to the Industry Liaison Office (ILO).
Professional fees (including fees to consultants)	**Not** allowed, unless specifically provided for in the grant, strongly justified and approved by Faculty/School.
Professional membership fees	**Not** allowed. This applies to PI and Co-PIs as well as all research staff funded from the grant.
Publications	Allowed. Page charges for publication of manuscript in professional journals are allowed. The costs of reprints and publishing in other media, such as books, monographs and pamphlets are not allowed unless directly related to the research project and specific approval has been obtained from the Faculty/School.
Purchase of lab supplies, consumables, animals, use of services/ research facilities or lab spaces within the NUS' central facilities	Allowed. The cost for the use of services and central research facilities owned by NUS such as animal holding units, central laboratory services are allowed and must be based on hosting unit's fee schedules which are consistently applied regardless of source of funds.
Repairs and maintenance of research equipment	Allowed, if specifically budgeted for the project and the equipment is used extensively for the research project. The period of maintenance funded from the research grant shall be restricted to the duration of the project. For new equipment, maintenance should not be budgeted for the duration the equipment is under warranty (e.g. Year 1) and quotations for maintenance contract must be included.
Software (< SGD3,000/unit)	**Not** allowed, unless these are deemed essential to the project, specifically provided for in the grant proposal and approved by the Faculty/School.
Staff retreat/bonding	**Not** allowed.

Translation service	Allowed. A service agreement or engagement letter should be issued to the party to clearly define the scope of service and the total payment due once the individual completes the work. Note that they should **not be receiving salaries or allowances**.
Transportation, postage & courier services	Allowed. This includes postage, courier and freight charges for bringing in equipment and specialised research consumables and reimbursement for staff transportation, for travels directly associated with the project.
Visiting professors	**Not** allowed unless specifically provided for in the proposal and approved by Faculty/School. The visiting professor/senior research fellow/visitors must be identified and his/her contribution to the project must be clearly defined and described in the proposal. Faculties should verify that the remuneration rates comply with NUS HR's Policy.
Volunteers and research patients	Allowed for payment to volunteers and research subjects provided this is within the scope of the research and has been provided for in the grant proposal and approved by the Faculty/School. The quantum shall be according to OFN prevailing guidelines on such payments.
Workshops/Seminars	Allowed. Organisation of the workshop has to be specifically provided for in the proposal and approved by the Faculty/School. Expenses related to the workshop must adhere to NUS policies and guidelines. Refreshments are not fundable, as such, workshop/seminar packages should include such provisions if it is to be provided to the participants.

Overseas Travel Related Expenses	
General policy	**Not** allowable unless specifically provided for in the proposal and approved by the Faculty/School. Conference participation should be directly relevant to the research project and necessary to accomplish project objectives. All travel must be in-line with NUS' existing and consistently applied travel policies. Visa fees, where applicable, is allowed. This applies to fees related to visa application, which is required to visit the country to carry out field work/research work/attend conference. FRC should assess and approve travel claims for students based on the all or some of the following criteria (The contribution, support and training of students should be reported in the annual and final reports): • Student must be working on the project • Student is named in the research proposal • Student must be named in the annual and final reports • Student must be presenting a paper during the overseas conference
Field trips	Allowed. All travel must be based on need and sufficiently justified.

Research Scholarship	
General policy	**Not** allowable.
Undergraduate and graduate stipend and tuition support	**Not** allowable.

Purchase of Equipment	
General policy	No purchase of equipment is allowed unless specifically provided for in the proposal and approved by the Faculty/School. The procurement of such equipment must be made according to NUS' prevailing policies and guidelines. Bank charges, customs and import duties specifically related to the payment for or importation of approved equipment used in the project are allowed.
Software (≥ SGD3,000 per unit)	**Not** allowable unless specifically provided for in the proposal and approved by the Faculty/School.

Annex B: Tier 1 Guide for Processing Variation Requests

S/N	Type of Request	Key Considerations	Supporting Document Required	Types of checks to be conducted by Faculty/School Administration	Approving Authority
1. Fund Virement					
General Considerations		The significance of the proposed items to project outcome and the reason it was not budgeted in original proposal. Fund virement is to support the project only, not for support of "follow- on"/future research. <u>Cost-savings principle</u> PI can apply to use cost-savings to purchase essential new items not previously budgeted for. However, purchase must be based on needs; availability of savings is not a justification for new purchase. <u>Stage of project</u> Compelling justifications must be provided for virement requests if project is ending in 1 month or less. Retrospective variation requests will not be allowed, unless there is compelling justification for submission of a late variation request.	AcRF_Tier_1-RGF_2-Grant_Variation Latest statement of account Relevant quotations	RGF2 is duly completed and endorsed. All supporting document attached. Check is done on whether requested item was in the approved budget and whether requested item is within Tier 1 fundable list. Fund availability Reasonableness of quotes by cross-referencing similar purchase or independent checks. Whether proposed purchase items are already available in AU, or can be more cost-effectively leased.	**<u>ODPRT through HOD and VDR:</u>** • Approval for PI who does not meet eligibility criteria • Subsequent no cost grant extensions • All other requests for deviation e.g. virement into OT vote **<u>VDR through HOD:</u>** • Changes within OT vote • Change in lead PI/investigators • Change in research scope/ • milestones/ KPIs • Initial no cost grant extension of up to 6 months, capped at a total project duration of 4 years Vice Dean Research Office (VDRO) to follow up with OFN. **<u>PI through HOD and VDR:</u>** • Virements across votes, for the last $10,000 or 10% of the grant, whichever is lower Vice Dean Research Office (VDRO) to follow up with OFN.

S/N	Type of Request	Key Considerations		Supporting Document Required	Types of checks to be conducted by Faculty/School Administration	Approving Authority
Fund Virement (Additional Requirement)						
Overseas Conference Travel/Field trips		Only for PIs, project researchers and students listed as team members in project.	Follows the travel norms and prevailing NUS policies, procedures and guidelines.		FRC has to ensure that the NUS' travel norms are adhered to in PI's amendments to the travel/conference budget. The necessity of the travel and sufficient justification provided should also be considered.	**No virement of funds is allowed into this sub-vote after budget is approved.**
Additional Expenditure on Manpower (EOM)		Detailed job scope must be provided for each new headcount requested.		Job scope of additional EOM	FRC needs to assess the reasonableness of request, e.g. whether the job scope requires a full headcount. If the need is short-term, FRC needs to assess if part-time manpower is more appropriate.	**PI through HOD and VDR:** • Changes within EOM vote Example: Change in designation/ scheme of hires, increase/ decrease in headcount, change in time commitment to the grant, changes in NWSW headcount/budget Vice Dean Research Office (VDRO) to follow up with OFN.
Visiting professor (VP)/visiting senior research fellow(VSrRF)/visitors[7]		Relevance and contribution to project outcome	The need for VP/VSrRF/visitors must be driven by project need (e.g. not because faculty/dept requires VP/VSrRF/visitors to give public lecture or other activities.)	Curriculum Vitae of prospective candidate	FRC needs to access the role and expertise of the visiting faculty.	**VDRO:** Vice Dean Research Office (VDRO) to follow up with OFN.
		Track record		Job scope/deliverables of VP/VSrRF/visitors	FRC needs to access reasonableness of request, e.g. the job scope is commensurate with the duration requested. Particularly, FRC needs to assess if the consultation can be done via email/tele-video conferencing, rather than through appointment of VP.	
		Duration of stay	The job scope and deliverables of VP/VSrRF/visitors must be clear for assessment of the duration required of his/her service			
		Salary/honorarium	Pay for VP/VSrRF/visitors must be aligned with university's norms			
Purchase of New Equipment/OOE Items		• Cost and useful life of equipment • Whether the equipment is available for use or loan elsewhere in the faculty/ NUS/research institutes/local research facilities • Depreciation of equipment of significant value should be charged to the project for the project duration only. This encourages prudent purchase and fair sharing of costs by those who will stand to benefit from the equipment even after the project has ended.	For equipment purchases within the last 3 months of the project, how does buying the equipment during the last 3 months of the project benefit the research?		Whether proposed new equipment/OOE is essential for project and not available elsewhere for shared use by project in an effective way.	**VDRs/Directors of Faculty/School:** • Changes within Equipment (e.g. purchase of new equipment), OOE and OT votes Example: Increase/ decrease in units purchased and purchase of new equipment or OOE. Vice Dean Research Office (VDRO) to follow up with OFN.

[7] Visitors include staff who have short-term appointments with NUS and concurrently retain full-time positions overseas. This is regardless of the job title such staff may have (e.g. Research Fellow/Visiting Research Fellow) at NUS.

S/N	Type of Request	Key Considerations		Supporting Document Required	Types of checks to be conducted by Faculty/School Administration	Approving Authority
Amendments to Project						
2a.	Departure[8] of PI; Change of PI (including variations for PI going on long leave)	Suitability of Nominated Replacement PI Faculty is encouraged to recommend replacements who have worked closely with PI, preferably on the project to be transferred.	Ability of Nominated ReplacementPI to capture the benefits and achieve the intended objectives of the project.	AcRF_Tier_1-RGF_1-Project_Amendments Information on outgoing PI: last day of service with University, name of institutions he will be joining, etc. Please refer to Guidelines on "***Procedure of Handing Over Projects due to PI Leaving Service or going on long leave***" (https://staffportal.nus.edu.sg/staffportal/research/manage/resignation.html). Department must ensure that PI complete and submit a checklist for every project he is PI. CV of Nominated Replacement PI/Letter of recommendation. Nominated Replacement PI is required to submit the Grant Endorsement Form and obtain all necessary research compliances, where applicable, before the WBS account is transferred to his/her name.	RGF1 is duly completed and endorsed, all supporting documents are attached. Application should reach the FRC at least 1 month in advance before PI leaves (for contract expiry/ resignation cases) or as soon as practicable for all other cases. Faculty and Department shall work closely with HR to ensure timeliness in submitting change of PI requests. FRC shall assess whether the Nominated Replacement PI is eligible based on Tier 1 eligibility criteria, he/she is suitable to take on the role of PI and has the skills to continue and complete the research work.	**VDRs/Directors of Faculty/School:** Vice Dean Research Office (VDRO) to follow up with OFN.

[8] This includes resignation, retirement, no-pay leave, sabbatical leave, extended leave of absence and any other instance where PI will temporarily or permanently cease to actively involved in the project/research.

S/N	Type of Request	Key Considerations		Supporting Document Required	Types of checks to be conducted by Faculty/School Administration	Approving Authority
		Applicable to departure of PI: The grant should be terminated if: • No suitable replacement is found; • Nominated Replacement PI is not approved; or • New Nominated Replacement PI cannot achieve the necessary outcomes within reasonable timeline.		**Applicable to Departure of PI:** Mitigation Plan: Department and Nominated Replacement PI should jointly develop a mitigation plan to sustain/resuscitate the project, including: • Setting new milestones/KPIs • Taking steps to ensure students' graduation is not disrupted • Committing to put all necessary resources and time The plan should be signed off by both the HOD and Nominated Replacement PI. Note: Should the PI plan to be away for more than 3 contiguous and/or continuous months in a year, the PI should submit a mitigation plan to FRC, to explain how the project will be kept on track. FRC may also wish to propose a covering/interim PI.	Faculty need to assess the feasibility of the mitigation plan.	
2b.	Change of Scope	Change of scope to pursue new research objectives is not allowed; this should be submitted as new proposal at grant calls.		Not applicable	Not applicable	
2c.	Project Extension	Impact on deliverables and usefulness of final research outcome in view of the delay. Cost implications.	To ensure currency of research, extension is capped at 6 months unless there are very compelling reasons to extend for a longer period. Must be within original approved budget.	AcRF_Tier_1-RGF_1-Project_Amendments Evidence of satisfactory progress (e.g. copies of publication arising from the research, abstracts of conferences attended, etc). Revised Project Implementation Schedule (Gantt Chart). Copy of latest Annual Progress Report submitted. Written comment from HOD and VDR on the progress and work done by the PI to-date.	RGF1 is duly completed and endorsed, all supporting documents are attached. FRC to assess if it is realistic for the project to achieve closure with a short extension. Request should reach the approving authority at least 3 months before project completion date. Delayed submission may be accepted with compelling justification. PI has no outstanding AcRF Tier 1 annual/final reports. Application from PIs with outstanding reports will be processed only after the outstanding reports have been submitted.	**ODPRT through HOD and VDR** • Subsequent no cost extensions capped at 4 years **FRC (through HOD and VDR)** • Initial extension of up to 6 months, capped at a total project duration 4 years Vice Dean Research Office (VDRO) to follow up with OFN.

S/N	Type of Request	Key Considerations		Supporting Document Required	Types of checks to be conducted by Faculty/School Administration	Approving Authority
2d.	Termination/ Lapse of Project	Consider alternative options to termination	Other options should be explored to ensure that the best outcome is achieved with the investment already made.	AcRF_Tier_1-RGF_1-Project_Amendments Winding-down Plan: Department and PI should jointly develop a winding-down plan, including: ▪ Propose a winding-down budget ▪ Ensure results are published/disseminated ▪ Students are transited to other projects or otherwise not disrupted due to the termination ▪ Equipment, material/ consumables purchased are properly accounted for and transferred to the department. The plan should be signed off by both the HOD and PI. Department report: Department should prepare a report that includes: • A review of what went wrong for the project • What are the alternatives to terminations and why they are not applicable in this case • Preventive measures to avoid future occurrence. The report should be signed off by the HOD.	RGF1 is duly completed and endorsed, all supporting documents are attached. Faculties/Schools to assess adequacy of the winding-down plan.	**VDRs/Directors of Faculty/School:** Vice Dean Research Office (VDRO) to follow up with OFN.
		Automatic Termination	If the original PI has become unavailable (e.g. resignation, passing), HOD should nominate a replacement PI. If the Nominated Replacement PI is not approved, the project will be automatically terminated.			
		Orderly conclusion of project	In cases of immediate termination, the project account(s) will be suspended. A separate winding-down budget should be drawn up for FRC's consideration. This covers expenses necessary to effect an orderly conclusion, for a period not exceeding 3 months from the date of termination. FRC shall discuss with PI and mutually agree on the effective date of termination.			

Annex C: Supplementary Guide for Preparation of Proposal

Annex C1	MOE AcRF Tier 1 New Discipline Clusters
Annex C2	Details of Research Proposal
Annex C3	NUS Guidelines for Budget Preparation

Annex C1: MOE AcRF Tier 1 New Discipline Clusters

Discipline Cluster	Sub-areas
STEM (Science, Technology, Engineering, Mathematics)	
Chemistry and Chemical Engineering (EP1)	Physical chemistry; Inorganic chemistry; Organic chemistry; Analytical chemistry; Macromolecular chemistry; Theoretical & computational chemistry; Other chemical sciences; Geochemistry; Chemical engineering.
Informatics and Mathematics (EP2)	Mathematics; Statistics; Other mathematical sciences; Information systems; Artificial intelligence & signal & image processing; Computer engineering (Software); Computer software; Computation theory & mathematics; Data format; Other information, computing & communication sciences.
Biomedical Engineering and Life Sciences (EP3)	Biochemistry and cell biology; Genetics; Microbiology; Botany; Zoology; Physiology; Ecology & evolution; Biotechnology; Other biological sciences; Medicine (General, Immunology, Medical biochemistry & clinical chemistry); Medical microbiology; Pharmacology & pharmaceutical sciences; Medical physiology; Dentistry; Optometry; Clinical sciences; Nursing; Public health & health services; Complementary/alternative medicine; Human movement & sports science; Neurosciences; Other medical & health sciences.
Physics and Engineering (EP5)	Astronomical sciences; Theoretical & condensed matter physics; Atomic & molecular physics; Nuclear & particle physics; Plasma physics; Optical physics; Classical physics; Other physical sciences; Geology; Geophysics; Oceanography; Hydrology; Atmospheric sciences; Other earth sciences; Aerospace engineering; Manufacturing engineering; Automotive engineering; Mechanical & industrial engineering; Resources engineering; Civil engineering; Electrical & electronic engineering; Geomatic engineering; Environmental engineering; Maritime engineering; Metallurgy; Materials engineering; Computer Engineering (Hardware); Computer hardware; Communications technologies; Interdisciplinary engineering; Other engineering & technology.
Non-STEM/SSH	
Accountancy, Business, Humanities and Social Sciences (EP4)	Political science; Policy & administration; Other policy & political science; Sociology; Social work; Anthropology; Human geography; Demography; History & philosophy of science & medicine; Other studies in human society; Law; Professional development of law practitioners; Justice & legal studies; Law enforcement; Other law, justice & law enforcement; Journalism communication and media; Economic theory; Applied economics; Economic history & history of economic thought; Econometrics; Other economics; Accounting, auditing & accountability,; Business & management; Banking, finance & investment; Transportation; Tourism; Services; Other commerce, management, tourism & services; Librarianship; Curatorial studies; Other journalism, librarianship & curatorial studies; Language studies; Literature studies; Cultural studies; Other language & culture; Historical studies; Archaeology & Prehistory; Other history & archaeology; Philosophy; Religion & Religious traditions; Other Philosophy & religion; Performing arts; Visual arts & crafts; Cinema, electronic arts & multimedia; Design studies; Other arts; Education studies; Curriculum studies; Professional development of teachers; Other education; Psychology; Linguistics; Cognitive science; Other behavioural & cognitive sciences; Architecture and urban environment; Building; Other architecture, urban environment and building.

Annex C2: Details of Research Proposal

Research description should be in no more than **10 pages (Arial font size 10, single line spacing)**. Information shall include specific aim(s) of the project, significance, approach, innovation, novelty, and preliminary studies/ progress reports related to the research proposal, as detailed in Annex C2 of the Application Guidelines and Programme Terms & Conditions. References cited should be provided at the end of the document. Information provided should be sufficiently self-contained for an assessment of the proposal without further reference to other materials.

a) Specific Aims

- *State concisely and realistically what the research described in this application is intended to accomplish, the hypothesis to be tested, and research questions to be addressed.*
- *Discuss how the aims of the project are original and innovative.*

b) Significance

- *Briefly describe how this project addresses an important problem of academic significance. State concisely how the success of the project will lead to the creation of new knowledge.*
- *State concisely how the outcomes of the project or its concepts and methodology will drive future research in this field. Relevant references should be appended.*

c) Approach

- *Discuss how the specific aims of the project would be achieved.*
- *Discuss in detail the conceptual framework, design, methods and analyses and describe how they are integrated and appropriate to the aims of the project.*
- *Highlight potential difficulties, limitations and problem areas in the proposed procedure, and propose alternative tactics.*
- *Describe how the project will employ novel concepts, approaches or methods.*
- *State concisely how the project challenges existing models, and describe its advantage over existing methodologies or technologies.*

d) Investigator

- *Discuss the role and contribution of each investigator and international collaborator In the project.*
- *Visiting Professors should be identified and their specific role and contribution to the project clearly defined.*

e) Environment

- *Discuss how the environment in which the proposed work will be done can contribute to the probability of its success.*
- *Discuss how the proposed experiments take advantage of unique features of the research environment or leverage on the strengths of collaborative arrangements.*
- *Include evidence of organisational support for the project.*

f) Preliminary Studies

For NEW APPLICATIONS

- *Provide an account of the Principal Investigator's preliminary studies (if any) pertinent to the applications and/or any other information that will help to establish the experience and competence of the investigator pursuing the proposed project.*

For SUPPLEMENTARY/RENEWAL APPLICATIONS

- *Give the start and end dates of the period covered since the research project was last reviewed.*
- *Provide a succinct account of published and unpublished results from the previous project, indicating the importance of the findings.*
- *Discuss how the proposed project is related to the previous project and what new knowledge will be created.*
- *List the titles and complete references to all publications and completed manuscripts that have resulted from the project.*

g) References

- *Please list in chronological order the titles and complete references to recent representative publications pertinent to this research proposal and the applicants' publications and patents held related to this research proposal.*
- *Highlight Scientific Award(s), if any, of the applicant(s).*

In addition, a useful guideline for the writing of proposal is **Heilmeier's Catechism** by George H. Heilmeier, President and CEO of Bellcore

- What are you trying to do? Articulate your objectives using absolutely no jargon.
- How is it done today, and what are the limits of current practice?
- What's new in your approach and why do you think it will be successful?
- Who cares? If you're successful, what difference will it make?
- What are the risks and the payoffs?
- How much will it cost? How long will it take?
- What are the mid-term and final "exams" to check for success?

Annex C3: NUS Guidelines for Budget Preparation

General Notes

1. This document serves only as a guide to PIs when budgeting for manpower cost in a grant application. **PIs should consult your Faculty's Human Resources Partner for further assistance e.g. latest salary rates and applicable benefits on budgeting for manpower appointments.**

2. EOM costs and related benefits (as per employment contract) are supportable as long as it is in line with the consistently applied NUS' HR policies. This will extend to NUS policies that govern staff recruitment and related costs (e.g. costs associated with the onboarding of staff, staff insurance, overtime claims, staff relocation, employment benefits, employment levy, employment pass, pre-examination medical check-up and housing allowance.)

3. Fractional charging for staff costs based on time commitment to the project must be practiced.

4. Please note that provision for unconsumed leave is not allowed by MOE. Please refer to ***Annex A: Guidelines for Fundable / Non-Fundable Items*** for more details.

5. All appointments are subject to funds availability and one or more of the prevailing terms and conditions of the research project grant.

NOTES for EOM BUDGET PREPARATION

A. Manpower

Please contact your **Faculty's Human Resources Partner for further assistance** on the latest salary rates, how to go about budgeting for the total manpower cost which should include salaries, employer CPF and costs of other applicable remunerative benefits, or on the various employment schemes.

Staff

1. PIs shall use reasonable efforts to employ or otherwise engage research staff (e.g. research fellow, research assistant, etc) who are Singapore Citizens or Permanent Residents unless the required expertise is not available or the skill of any foreign person is necessary for the performance of the research.

2. PI/Department should ensure that the employment of research staff comply with MOM's Tripartite Guidelines on Fair Employment Practices and NUS' HR policies.

3. The ranges of annual base salary (ABS) for each grade of appointment (extracted from OHR[9]) for research staff are shown in the table below. The first year's monthly salary is the entry point of each scale. If a PI wishes to pay the appointed staff at a higher salary point, he can adjust the budget but must provide reasons for higher salary in his grant proposal.

Other Grade of Appointment on Research Track	
Senior Research Fellow/Scientist & Equivalent	$72,000 to $165,000
Research Fellow/Scientist & Equivalent	$60,000 to $120,000
Research Associate & Equivalent	$51,000 to $96,000
Research Assistant/Engineer & Equivalent	$42,000 to $78,000

The terms and conditions of Research staff appointments are set out by OHR. Please refer to (*https://share.nus.edu.sg/corporate/policies/hr2/employment-terms/research-track-scheme.pdf*) for details of the terms and benefits of staff employment on Research Track.

[9]accurate as of 01 Jan 2022

Lab Officers

1. The salary range for Lab Officers as extracted from OHR is as follows:

Grade (Scheme of Service)	1	2	3	4	5
Laboratory Technologist	$4,870 - $7,100	$3,600 - $6,100	$2,420 - $5,030	$1,900 - $3,880	$1,520 - $2,420

The circular can be referred to from: *https://nusu.sharepoint.com/sites/corporate/circulars/hr2_for_staff/Forms/AllItems.aspx?id=%2Fsites%2Fcorporate%2Fcirculars%2Fhr2%5Ffor%5Fstaff%2Fperformance%2Dmgt&viewid=eeffc3de%2D21f1%2D4438%2D9b22%2D409cabf672d6*

Visiting Appointments

1. Please refer to OHR's circular HR 214/09 for terms & conditions applicable to visiting appointment at *https://share.nus.edu.sg/corporate/policies/hr2/employment-terms/visiting-appointments-scheme.pdf*.

Casual staff/student assistants

1. The guidelines on the appointment of **non-academic casual employment (non-NUS students)** can be found at *https://share.nus.edu.sg/corporate/policies/hr2/employment-terms/Contingent_Workforce_Policy.pdf.*

2. For appointment of NUS students under the NUS Students Work Scheme (NSWS), please refer to the https://nus.edu.sg/cfg/students/jobs-internships/nsws. Note the restrictions on hiring students receiving selected Research Scholarships.

3. For the appointment procedure of student interns, please refer to https://nus.edu.sg/cfg/employers/internships.

4. The Student Research Assistant (SRA) Scheme for Year 5 and 6 PhD students was introduced on 01 January 2022. More information on eligibility, application process and tuition fee concession can be found at https://nusgs.nus.edu.sg/student-research-assistant.

5. The GL for student assistants and student interns are different.

6. All appointments are subject to funds availability and one or more of the prevailing terms and conditions of the research project grant.

NOTES FOR EQUIPMENT BUDGET PREPARATION

Equipment/Facilities

1. Only equipment properly justified for the research project, not presently available/accessible in the University, and required for dedicated applications should be included.

2. PI is advised to approach relevant laboratories, department finance staff or procurement officer to check the availability of the equipment in the University including Research Institutes/Research Centres.

3. It is mandatory to attach vendor's written quotations.

4. PI is advised to budget for GST (at the prevailing rate) and future cost increases over the entire lifespan of the project.

5. Justification of budget request should be provided along the following lines:
   a) The need to purchase equipment/facilities.
   b) The choice of equipment e.g that the equipment chosen will give the best value for money.
   c) Explain why it is not possible or cost effective to meet the demand from University's existing stock of equipment.
   d) Where use of major equipment/expensive instrument (in which the total equipment budget constitutes ≥50% of total project value, and/or a single piece of equipment costing ≥S$100,000) is proposed, please provide:
      (i) Explicit statements on existence of similar equipment elsewhere and its availability;
      (ii) Commitment from other potential users;
      (iii) Justification of usage level;
      (iv) Provision for maintenance;
      (v) Details of other intended uses upon project completion.
   e) Append a list of existing equipment (if any) that the project will be using. Equipment descriptions, costs and locations must be provided

6. Computer software that cost S$3,000 or more (excluding GST) are required to be captialised as intangible assets. PI should budget for the item under the Equipment category. Software that cost less than $3,000 (excluding GST) may be budgeted under the OOE category. PI is advised to refer to OFN' policy on "Policies & procedures on intangible assets" at *https://nusu.sharepoint.com/sites/ormc/NUSpolicy/policies/OFN/OFN_Intangible%20Assets%20Policy%20and%20Procedures.pdf* for more information.

7. PI is advised to seek the advice of department procurement officers and refer to the University Procurement Policy at https://proctor.nus.edu.sg/policy/ on procurement procedures.

Materials/Consumables

1. PI is advised to budget for GST (at the prevailing rate) and future cost increases over the entire lifespan of the project.

2. A detailed breakdown of items and costing should be provided. Please attach vendor's written quotations/sample quotations for individual items, where possible.

3. Justification of budget request should be provided along the following lines:
   (a) The need for consumables. Consumables requested must be items that can be uniquely and unambiguously identified with the research project.
   (b) The number, type and source of supply of animals to be used in the research. Show that the number of animals to be used is the minimum required to give valid results.

4. PI is advised to seek the advice of department procurement officers and refer to the University Procurement Policy at https://proctor.nus.edu.sg/policy/ on procurement procedures.

5. PI who purchase databases/data sets are reminded to adhere to the *Research Data Management Policy* and *Circular on Access to and Use of Foreign-Sources Personal Data for NUS Research*.

B. Overseas Conference Travel / Field trips

1. Where there is a need for the researcher or project team members to travel overseas for conference and/or research purposes, applicants should arrange to coincide this with travel for their conference and field trips. All overseas travel should be arranged with the University's panel of approved travel agents.

2. OHR's Policy on Leave Matters (HR 131/13) is available at https://staffportal.nus.edu.sg/staffportal/portal/hr-and-benefits.html. Financial assistance provided under different leave types can be found at *assistance.pdf*. Please refer to Annex B1 for subsistence allowance payable. For further information/clarification, please contact OHR.

3. Virement of funds into the Overseas Conference Travel sub-vote after budget is approved is **not allowed**.

4. Conference participation should be directly relevant to the research project and necessary to accomplish project objectives.

C. Invited Overseas Researchers

1. Entitlements of overseas researchers (Academic visitors) invited to NUS as part of a Research Programme (with stay of up to 1 month) are:
   - Economy airfare
   - Per diem - $150/day without accommodation; $75/day with accommodation

   Please refer to OFN circulars on withholding tax (where applicable) and consult the Finance Officer for further clarification, if necessary:

   Withholding Tax for Non-Residents (NRs) – https://nusu.sharepoint.com/sites/ormc/NUSpolicy/policies/OFN/Withholding%20Tax%20on%20Payments%20to%20Non-Residents%20Professionals_Nov17%20(NRP).pdf

   Withholding Tax for Non-Resident Professionals (NRPs) https://nusu.sharepoint.com/sites/ormc/NUSpolicy/policies/OFN/Withholding%20Tax%20on%20Payments%20to%20Non-Residents_May10%20(NR).pdf