

National Research Fund Guide

(With effect from 1 July 2016)

NNATIONAL **R**RESEARCH **F**FOUNDATION
PRIME MINISTER'S OFFICE
SINGAPORE

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A. OVERVIEW

I. Permissible Uses of the National Research Fund

1. The National Research Fund (NR Fund) can only be applied for the purposes specified in the National Research Fund Act 2006, section 5(2):

- a. to provide financial assistance (including loans and scholarships) to any public authority¹, enterprise, educational institution or other person (whether in Singapore or elsewhere²) undertaking or facilitating research and development activities;
- b. to promote or assist (financially or otherwise) any enterprise engaged in the exploitation of research and development activities undertaken by any public authority, enterprise, educational institution or other person (whether in Singapore or elsewhere), where such an enterprise, in the opinion of the Board, is profitable and efficient or capable of becoming profitable and efficient and has reasonable prospects for profitability, development, expansion, growth or providing viable employment;
- c. the payment of remuneration or allowances payable to persons (other than public officers) engaged to advise the Board or Council in the performance of their respective functions under this Act;
- d. the payment of other expenses incurred by the Board or Council in the performance of their respective functions under this Act, including any remuneration or allowances payable to the members of the Board or Council who are not public officers;
- e. the payment of expenses incidental to or arising from the administration, investment and management of moneys in the Fund.

II. Different Levels of Funding

2. There are 3 levels of funding: Programme, Funding Initiative, and Project:
 - a. Programme – comprises one or more R&D funding initiative(s) under a common, pre-defined theme. (e.g. National Innovation Challenge on Active and Confident Ageing (NIC on Ageing), National Robotics Programme, etc).
 - b. Funding Initiative (FI) - subset within a Programme that has a predefined set of characteristics (e.g. deliverables, evaluation processes and criteria) distinct from other FIs in that Programme (e.g. Ageing in Place FI under the NIC on Ageing, the Robotics Domain-Specific Public Sector Lead Demand FI under the National Robotics Programme, etc.). Each FI will comprise one

¹ Public authority refers to statutory boards and excludes ministries. NRF may reimburse ministries that made payments for expenses on behalf of NRF if the payment is within the scope of section 5 of the National Research Fund Act ("Purposes of Fund") and is authorised by the Board under section 7 ("Withdrawals") of the Act, i.e. it must be a payment that NRF can legally make directly by itself.

² Funding for research conducted overseas may be considered where there are compelling reasons.

or more projects managed collectively and evaluated based on a common set of criteria and processes.

- c. **Project** – specific funding for a research performer, or a group of research performers, aimed at meeting the overall objectives of the FI it belongs to. (e.g. individual grants given out under the Ageing in Place FI, individual NRF Fellowship and Competitive Research Programme (CRP) awards etc).

III. Compliance with Code of Ethics, Research Integrity and Responsible Research Conduct

3. The Host Institution, Director of Research, each Lead Principal Investigator, research personnel and all other persons involved in the Research shall in carrying out the Research comply with:

- a. The provisions of any relevant laws of the Republic of Singapore, statutes, regulations, by-laws, rules, guidelines and requirements applicable to it as the same may be amended or varied from time to time; and
- b. All applicable policies and procedures adopted by NRF as the same may be amended or varied from time to time.

4. The Lead Principal Investigator of a project has the responsibility to conduct research in compliance with the Host Institution's code of ethics, research integrity and responsible research conduct.

5. The Host Institution also has responsibility to ensure researchers' compliance with best practices as well as ethical, legal and professional standards relevant to their research. The Host Institution, as the recipient organisation of funding from NRF for research, must have in place a research integrity policy and procedures³.

IV. Intellectual Property (IP) Management

6. IP management should be in accordance with NRF's National Framework of IP Principles for Publicly-funded Research and Development (see [Annex A](#)).

7. Invention disclosures must be promptly reported to the relevant IP coordinator or Innovation and Enterprise Office (IEO) by the research teams, so as to protect, commercialise and/or gainfully exploit IP arising from the research funded by NRF.

8. NRF strongly encourages that any reward from the exploitation of any IP be shared fairly with the research teams.

³ This should set out the principles for the responsible conduct of research and procedures for investigating and responding to accusations of misconduct. Host Institution should also endeavour to provide training in responsible conduct of researchers, for all its researchers.

V. Open Access

9. All peer-reviewed publications arising from NRF-funded research must be made publicly available no later than 12 months after the official date of publication (e.g. A copy may be deposited in the Host Institution's Open Access (OA) repository or any other subject OA repository, in accordance to the Host Institution's OA policy).

VI. Acknowledgements

10. All recipients of NRF funding should attribute NRF as described in Annex B.

11. Regardless of whether it is during or after completion of the research, funding recipients who publish or produce any works which relate to the NRF-funded research should acknowledge NRF for its funding support.

12. Published materials include scientific publications, books, journals, articles, newsletters, brochures, posters, websites, conference materials, signage, case studies and reports.

13. Where relevant, efforts should also be made to acknowledge NRF support in media releases, interviews, speeches, videos or other publicity/information platforms.

14. NRF funding recipients are required to email copies of publicised materials relating to NRF-funded programmes / projects to corpcom@nrf.gov.sg.

B. PROGRAMME OFFICE

I. Governance

1. Each Programme shall have a designated Programme Office that has defined roles, reasonably-scoped tasks and a reporting relationship to the Designated Authority (DA) (e.g. Domain EXCO Chair or Permanent Secretary for Implementing Agency), which provide guidance to the Programme Office. Where possible, the Programme Office should be part of the Implementing Agency for the Programme.

II. Scope of Funding and Budgeting of Programme Office

2. The Programme Office budget (including EOM, associated OOE and non-associated OOE), regardless of the source of funds, should be capped at 4% of the budget allocated to the Programme Office in the current funding tranche. Expenses beyond this cap should be approved by NRF.

3. Programme Offices must establish governance structures and appropriate processes to account for the usage of the operating budget of the Programme Office. NRF should be informed of these structures and processes.

4. If the Programme Office comprises public officers employed by Ministries or Statutory Boards involved in the Programme, then:

- a. NR funds should not be used to fund Expenditure on Manpower (EOM) and associated Other Operating Expenses (OOE) of such Programme Officers.
- b. Instead, the host Ministry or Statutory Board of the Programme Office should request for headcounts and corresponding EOM and OOE funding through the Reinvestment Funds – Manpower Management Framework (RF-MMF) process. Requests should be made through NRF to MOF.
- c. NR funds can be used to support non-associated OOE⁴ to fulfil the purposes set out in Clause 5(2)(a-e) in the NR Fund Act (see A.I.1 of NR Fund Guide). This could include costs incurred to support International Advisory Panel or Evaluation Panel meetings, audits, and costs relating to grant applications and progress reviews, etc.
- d. NR funds can be used to contract individuals or organisations with expertise on research and technology management (and who are not public officers employed by Ministries or Statutory Boards) to carry out tasks associated with the Programme Offices, but responsibilities remain with the Programme Office. Such expenditure will be considered as non-associated OOE.

5. If the Programme Office is comprised entirely of individuals who are not public officers employed by Ministries or Statutory Boards, but have been contracted by the

⁴ i.e., these costs have no direct relationship with public officers hired to run the Programme Office.

Implementing Agency, either individually or as part of an organisation, to carry out the role of a Programme Office, then NR funds can be used to fund all categories of costs (i.e., EOM, associated OOE and non-associated OOE). The 4% cap still holds.

6. Programme Office budgets should be approved by the Domain Exco co-chairs, Sub-Committee co-chairs or PS (NRD), following which a letter of award will be issued by NRF. The funds will be considered as committed at that point.

7. The cost of setting up/running an International Advisory Panel (IAP) should be part of the Programme Office budget, and can be supported for the following only:

- a. Airfare for panel members to attend meetings in Singapore;
- b. Accommodation, food, transport and other incidental expenses;
- c. Annual honorarium for each member; and
- d. Expenses related to the organisation of IAP meetings in Singapore

8. R&D expenditure related specifically to any FI within a Programme must be budgeted in the FI and not charged to the operating costs of the Programme Office. Beyond the NR Fund Guide, the Programme Offices hosted in Ministries or Statutory Boards will also have to adhere to the requirements and guidelines of its host Ministry or Statutory Board when managing its budget.

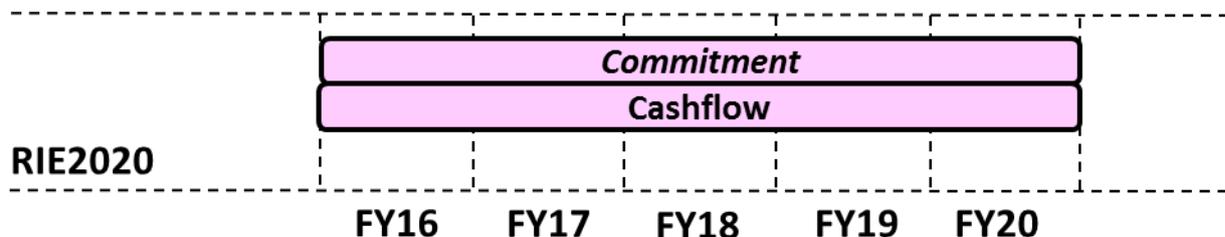
III. Disbursement of Operating Cost

9. For non-associated OOE, annual disbursements to Programme Offices will strictly be on a reimbursement basis (see Annex C for funds drawdown template). The disbursement of operating budget to the Programme Office will be subject to the host Ministry's or Statutory Board's Finance Policies and Procedures.

IV. Programme Office Cash Flow

10. Programme Office cash flow will be budgeted up to the end of the current five-year funding cycle in the first instance (e.g. a RIE2020 Programme Office for an FI within a Programme that has a commitment period that ends in FY2020 will have cash flow up to FY2020) (see Figure 1).

Figure 1: Programme Office Commitment and Cash Flow Periods



11. Cash flow beyond the current five-year funding cycle, e.g. for the Programme Office to complete the necessary reports and audit checks for on-going committed projects, will be subject to NRF's approval and MOF's agreement.

12. If an FI is approved after the mid-term of the current five-year RIE funding cycle, the budget for the FI can be committed up to the mid-term of the next five-year funding cycle subject to MOF and NRF's approval (refer to section VIII - *Period when Commitments can be made under a FI*). Accordingly, the cashflow for the Programme Office, appropriately pro-rated based on the size of the FI, would take reference from the commitment period of the FI.

C. FUNDING INITIATIVES

I. Submission of FIs

1. Annex B shows the flow chart for the submission and approval of a FI and the approval of specific projects within the FI.
2. FIs should be developed based on the broad principles laid out in Annex C.
3. FIs should be administered through the Integrated Grants Management System (IGMS), when ready, and prior to that, through the Research, Innovation and Technology Administration (RITA) system.
4. The FI proposal should be submitted to NRF for approval, using the template in Annex F.

II. Evaluation of FIs

5. The approval of the FI by NRF will be based on NRF's evaluation of the extent to which the FI meets the objectives of the specific R&D Programme.
6. The 3 evaluation criteria used to determine the merits of an FI proposal are:
 - a. Excellent Science and Cutting-Edge Technology
 - i. The proposed activity must involve innovative and cutting edge research that has the potential to accrue economic and/or societal benefits to Singapore and globally. A Scientific Advisory Board (SAB) or other international expert panels (IEP) can be convened to assess and benchmark the science and technology against international standards.
 - ii. The proposed activity must seek to bring together the best R&D talent available. This could be assessed via the accomplishment of researchers, international peer appraisals and interviews, etc. as necessary.
 - iii. The evaluation process for projects to be supported under the FI should include an assessment of the scientific and technology merits of the project.
 - b. Significant Economic/Social Benefits
 - i. The proposed activity should leverage Singapore's existing strengths and be in areas where Singapore has or could have a competitive advantage or where there is a national need or challenge. The proposal

should articulate how value from the proposed activity would be created and captured in Singapore.

- ii. Tangible measures of economic/social benefits include creation and ownership of intellectual property, start-up companies and spin-out enterprises, licences to companies, sales of products by companies using the IP developed from the FI or its projects, investment commitments attracted to Singapore, or solutions to national problems.
- iii. Notwithstanding that not all R&D activities have direct economic spin-offs, a system should be put in place for each FI to move research results closer to the marketplace and commercialised into new products/services or deployed to solve national needs. This could be via pro-active technology transfers, collaborations with other research institutes or industry for further development, etc.

c. Robust Management and Governance

- i. The proposed activity should not duplicate existing programme or scheme. NRF funding should be utilised only where there are funding gaps or for new initiatives.
- ii. The proposal should set out defined objectives, reasonable milestones and deliverables of the activity and establish a clear structure of accountability.
- iii. The proposal should articulate the system to be put in place for good corporate governance, with adequate checks and balance. This would include regular reviews to monitor that the stated objectives are achievable or are being achieved, and that the budget is managed properly, etc.
- iv. The proposed activity must be sustainable, e.g. plans have been made for long term funding beyond the seed/start-up funding provided by NRF, co-funding by industry/donors, assured public funding, etc.

7. Implementing Agencies / supporting Ministries or Statutory Boards should consider these criteria before endorsing any proposal for submission to NRF. NRF would seek MOF's input, as necessary, during the evaluation process.

III. RIE2020 Budget Allocations and FI Approvals – Approving Authority and Financial Limits

8. A RIE2020 Programme proposal must include details on the FI(s) within the Programme, and seek concurrent approval of the FIs together with the Programme. FIs, and projects within the FIs, are subject to the approving authorities and financial limits shown below in Table 1, regardless of the source of funds. Where appropriate, FIs should be grouped together as a thematic Programme (e.g. Ageing, Robotics).

9. In compliance with the NR Fund Act, the approval of FIs and projects within these FIs to be supported through the NR Fund must be by a relevant NRF Board member(s) as stated in Table 1 and will require ratification of the NRF Board. Upon ratification, approval by the NRF Board member(s) then becomes approval by the Board, bringing the approval in compliance with the terms of the Act.

Table 1: Financial Limits for Approving Authority of NR Funds

Financial Limits	Approving Authority		
	Project	Funding Initiative	White Space
>\$150M	NRF Board Exco	NRF Board Exco	NRF Board Exco
\$25M < x ≤ \$150M	Minister of the Lead Implementing Agency	Domain Minister-in-charge (Chairman NRF for horizontal initiatives)	Chairman NRF
≤ \$25M	PS or Executive Chairman of Lead Implementing Agency	Domain Exco Chair (Sub-Committee Chair or PS (NRD) for horizontal initiatives)	HCS for \$10M < x ≤ \$25M and PS (NRD) for ≤ \$10M

10. The formation of Programmes should be concurrent with or subsequent to the approval of FIs. This groups the FIs in a Programme to be administered by a Programme Office. The Programme Office must ensure timely reporting to NRF of projects within a FI that have been approved by the relevant Board member, so that NRF can then seek ratification of the Board on a timely basis.

IV. Public Communications

11. Programme Offices, Ministries, Statutory Boards or Implementing Agencies must not make any public comments relating to any FI or projects within the FI that they have submitted to NRF before the FI is officially approved.

12. This is in compliance with the requirement that NR funds cannot be made available without formal approval by NRF. This will avoid jeopardising Government's public standing through a situation where a public commitment is made on a project without the assurance of funding for the project.

V. Award of FI

13. Successful applicants will be informed by NRF. Notifications of award of the FI in the form of a Letter of Award, will be sent to the Designated Authority and copied to the Executive Director (or equivalent) of the Programme Office.

14. The Letter of Award includes the following:

- a. Form of acceptance
- b. Terms and conditions
- c. Budget

Refer to Annex G for the LOA template.

15. The validity period of the FI will be clearly stated in the Letter of Award.

VI. Acceptance of Award

16. The Acceptance Form must be acknowledged by the Designated Authority (e.g. Domain EXCO Chair, Permanent Secretary for Implementing Agency). The Acceptance Form should be returned to NRF within 1 calendar month from the date of issue of the Letter of Award.

VII. Validity of FI Approval

17. Approvals of an FI shall be valid for a period of 18 months. The validity period is the maximum time allowed between approval of the FI and commencement of its implementation (i.e. when a budget commitment is made). If the implementation of the FI does not commence within 18 months, the approved budget will lapse and the FI is required to be resubmitted to NRF for approval. This is to address the possibility that conditions may have changed if there is a significant lapse in time between the approval and commencement of implementation of the FI.

VIII. Period when Commitments can be made under a FI

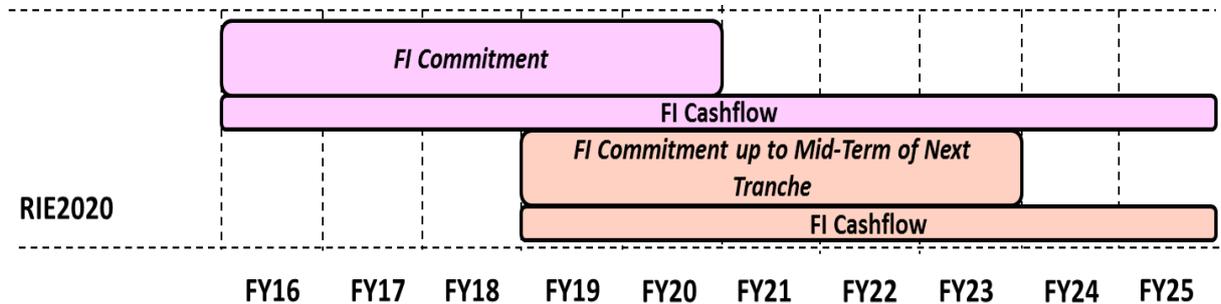
18. The budget of FIs can be committed up to the end of the current five-year RIE funding cycle. If a FI is approved after the mid-term of the current five-year RIE funding cycle, the budget can be committed up to the mid-term of the next five-year funding cycle subject to MOF and NRF's approval. Commitment will be defined as the offer of a Letter of Award to a research performer or another party carrying out the activities as defined under the FI.

IX. FI Cash Flow Period

19. FI cash flow (excluding Programme Office cash flow) will be up to the end of the next five-year funding cycle (i.e. a RIE2020 FI with a commitment period that

ends in FY2020 can have cash flow up to FY2025). Cash flow beyond this will be subject to NRF's approval and MOF's agreement.

Figure 2: FI Commitment and Cash Flow Periods



IX. Multiple Sources of Funding

20. Recipients of NR Fund may also receive funding from other sources. In such instances, the following principles would apply:

- a. Time commitment. PIs, researchers and project implementers should take personal responsibility for their professional commitments. They should observe the spirit of the arrangement after declaring the proportion of their time they would spend on the NRF-funded projects.
- b. No double-funding. During the grant call process, the Programme Office shall do due diligence to prevent double-dipping of funds for the same activity that could result in more than 100% funding, or could dilute the funding commitment expected of the other party (if there was such a requirement tied to the receipt of NR funding). Within the above conditions, funding from more than one source of NR or government funding is allowed, provided that the project satisfies the intent of all the funders. Where this occurs, it is the duty of the PIs, researchers and project implementers to declare other sources of NR or government funds that they are also applying for, or have already received.

21. In the case of co-funded projects, the requirements stated in the NR Fund Guide will still apply to the expenditures of the project which utilises NR Funds, regardless of the other source of the co-funding.

D. POST-AWARD MANAGEMENT

I. Use of Approved Budget Confined to Items Integral to Funding Initiatives

1. The approved budget for a FI should only be used for items integral to the FI, as approved by NRF.

II. Budget Cycle

2. The timeline for Programme Offices to submit their proposed budget and cash flow projection is shown in Table 2 below. This timeline aligns NRF's budgeting cycle with that of MOF. This allows the operating budget for the Programme Offices to be incorporated into the Ministry or Statutory Board's budget. The proposed budget and cash flow projection must be endorsed by the Programme Office's Designated Authority (e.g. Domain EXCO Chair, Permanent Secretary of Implementing Agency).

Table 2: Timeline for Submission of FI Budgets

Submission	Deadline
Current FY's revised budget for implementing the approved FI	Mid Oct of current FY
Next FY's budget for the approved FI	Mid Oct of current FY

3. Programme Offices are required to use the budgeting template in Annex H for their annual budgeting exercise.

III. Frequency of Disbursements

4. Depending on the disbursement mode supported by the Programme Office to its grantees, quarterly disbursements of the NR Fund to the relevant FIs can either be on an advance or reimbursement basis.

5. NRF's approval must be sought to change the frequency of disbursement (e.g. half-yearly disbursement instead of quarterly).

6. The Programme Office will put up a fund request to NRF (based on their cash flow projections or the total claims of all FIs in their Programme) that is duly verified by their host Ministry, Statutory Board, or Implementing Agency of the Programme.

7. Submissions should be made approximately one month before the intended date of disbursement. The Programme Offices shall use the fund request template for FIs attached in Annex I for their submissions.

IV. Variations to Budget of FI

8. Any request to vire the annual budget within or between FIs under the same Programme is deemed to be a variation to the approved budget of the FI and must comply with prescribed approval limits and authorities.

V. Variation to Scope of FI

9. Any variation to the approved scope of an FI, including lead investigator, milestones, deliverables, desired outcomes, implementation methodology and approach must be approved by NRF.

VI. Extension of a FI

10. Any extension to an FI must be approved by NRF. Extensions should not extend beyond the end of the current five-year funding cycle. Any extension (commitment and cash flow) beyond the current five-year funding cycle will be subject to MOF's approval.

VII. Approving Authority of Variations to FIs

11. The approving authority for variations to FIs is summarised in Table 3:

Table 3: Approving Authority for Variations to FIs

Variation Request	Approving Authority
Extension of commitment timeline of FI up to the end of the current five-year period	To follow the Approving Authorities and Financial Limits in section C.III
Extension of commitment timeline of FI beyond the current five-year period or of cashflow timeline beyond the next five-year period	To follow the Approving Authorities and Financial Limits in section C.III, subject to MOF's agreement
Proposed new / revised scope	To follow the Approving Authorities and Financial Limits in section C.III
Virements between or within FIs in the same Programme	To follow the Approving Authorities and Financial Limits in section C.III
Virements between FIs in different Programmes	To follow the Approving Authorities and Financial Limits in section C.III
Request for supplementary budget	To follow the Approving Authorities and Financial Limits in section C.III

12. For virements, the approving authorities and financial limits will be based on the highest budget involved. For example, in the following virement, approval of the NRF Board Exco is required, because the largest FI, based on the initially approved allocation, is more than \$150M in value:

	Original Allocation	Revised Allocation
Funding Initiative A	\$155M	\$145M
Funding Initiative B	\$10M	\$20M

13. NRF's support (at least at the Director level) should be sought for all variation requests prior to seeking approval from the appropriate authorities.

VIII. Progress Reports and Final Report of a FI

14. Programme Offices are to submit an annual progress report to NRF for each FI using the prescribed format in Annex J. A consolidated overall progress report for all FIs under its charge should be submitted as well.

15. The annual progress reports shall be submitted within 3 months after the end of each Financial Year. NRF reserves the right to demand for more frequent progress reports, if necessary.

16. The submission of annual progress reports is to continue until the end of the last project within a FI, following which, a final report must be submitted.

17. Progress / Final reports must be endorsed by the Programme Office's Designated Authority.

18. Upon NRF's request, on a periodic basis, the annual progress / final reports must be accompanied by audit reports. The auditor(s) must certify that the funds are used in accordance with the terms and conditions stipulated by NRF.

19. Late submission of progress reports can lead to suspension of fund disbursement.

IX. Progress Review / Final Evaluation

20. The performance of both the overall Programme and the Programme Office should be reviewed on a regular basis, and should primarily be organised by the host Ministry, Statutory Board or Implementing Agency of the Programme.

21. NRF may however also require the Programme Office to provide a progress update or final report (in a written report and presentation format) to a Review Panel appointed by NRF.

X. Final Statement of Account

22. Final claims should be made within 6 months from the date of completion of the FI (Annex D). NRF will process final claims for a particular programme only upon receipt of the certified consolidated statement of expenditure.

XI. Closure/Termination of FI

23. Any funds allocated for an FI that are not committed for any project at the end of the FI duration will be returned to the NR Fund. Similarly, funds committed for a project within an FI that are not utilised at the end of the project duration will be returned to the NR Fund.

24. NRF reserves the right to terminate any FI if the FI is assessed to be underperforming. Further commitments (award of projects within the FI) will then not be allowed. Funding will continue up to the end of the last project awarded prior to termination of the FI.

XII. Accounting of National Research Fund

25. Programme Offices must keep proper accounts and have an established governance structure and processes in accounting for the funding from NR Fund.

26. Funds from the NR Fund should by and large be accounted for separately in a separate interest-bearing bank account. If an existing account is used, Programme Offices are to ensure that interest accrued by funds from the NR Fund is apportioned accordingly.

27. Implementing Agencies should ensure that grant-recipient organisations or individuals submit a timely report on all completed projects so that prompt action can be taken to return any unutilised funds to the NR Fund. Implementing Agencies should account for the return of unutilised funds either via the creation of a deposit record or journal adjustment.

28. Implementing Agencies should also ensure that journal adjustments are made to account for bank interest as well as any other refund. Bank interest and other receipts should not accrue to the grant recipient-organisation as this would amount to an increase in funding above the approved budget of an FI or the Programme Offices' approved operating budget.

29. To ensure that NR Funds are utilised appropriately, Programmes funded by the NR Fund will be subjected to audit by the Internal Audit of the Accountant-General Department (AGD) periodically from the date of the first draw down of funds. NRF also reserves the right to demand for additional audits, if necessary. The audit scope for Programmes funded by NR Funds includes certification by auditors of the fund recipients, that NRF terms and conditions were complied with.

Annex A

NATIONAL FRAMEWORK OF INTELLECTUAL PROPERTY PRINCIPLES FOR PUBLICLY-FUNDED RESEARCH AND DEVELOPMENT

Background

1. The intent of the National Framework of IP Principles is to facilitate a rapid and efficient translation of publicly-funded research ideas and inventions into new processes, products and services that benefit Singapore. The adoption and implementation of the framework will bring about a more widespread use of research ideas and inventions to spawn new high-tech companies, uplift existing companies and enhance our long-term economic competitiveness.

Key Principles for Public-Funded R&D

2. Principle 1: Implement policies that promote exploitation of publicly-funded research ideas for the benefit of Singapore, and allow the public agency to grant licenses to other parties if current licensees are ineffective at commercialisation.

- a. Move away from the model of maximising licensing income to a “volume model” that focuses on output i.e. volume and rate of moving research results into the marketplace.

This will avoid a “home run mentality” where limited time and resources are focused on technologies that appear to promise the biggest and fastest payback. Technologies that might have broader economic value and longer term potential, but which return little licensing fees, could be overlooked otherwise.

- b. Accelerate the process by which inventions are commercialised.

A simplified licensing process and a “standard” licensing template with some flexibility for tailoring to the needs of the licensee will smoothen and speed up the licensing process. This will greatly reduce the significant costs in terms of time and effort involved in lengthy negotiations.

- c. Adopt flexible licensing terms - non-exclusive licensing with royalties from sales, should be the starting point.

This will maximise the number of companies exploiting publicly-funded research inventions. Licence agreements should avoid asking for large once-off upfront licensing fees and guaranteed royalties, to make licensing obligations more affordable to companies.

3. Principle 2: Provide attractive incentives for inventors involved in the creation of IP.

- a. A fair and attractive incentive policy will encourage researchers and inventors to go beyond merely carrying out research, to pursue spin-off and commercialisation opportunities as well as be actively engaged in the creation, identification, protection and exploitation of IP with the Innovation & Enterprise Offices (IEOs).

In principle, all who have made inventive contributions to the development of the IP should share in the benefits. Many universities and research institutions have adopted a formula-based approach to the allocation of licensing income.

- b. Giving inventors a share of the equity in a spin-off company can be another appropriate incentive as long as potential conflict of interest situations are addressed. Inventors then have a direct and continuing interest in the spin-off company which will increase its chances of success, including contributing to ongoing upgrading of the technology.

4. Principle 3: IP exploitation should, to the best extent possible, be based in Singapore. Preference should be given, and reasonable efforts made, to license publicly-funded research results to Singapore-based companies, including SMEs.

This would anchor technology transfer activities in Singapore and provide avenues for developing technology transfer and IP management professionals, with benefits accruing to Singapore.

5. Principle 4: If the Public Agency or university elects not to own and/or commercialise the IP within an agreed upon timeframe, it may permit the inventor(s), where appropriate, the right to own, license, protect and commercialise the IP at his own expense.

There is no reason to deny the inventor(s) the right to exploit the IP at their own costs and risk if the university IEO chooses not to do so. IP left on the shelf loses value over time and becomes obsolete.

6. Principle 5: Public Agencies shall have a clear policy on whether they will claim any ownership and/or rights for IP generated from R&D that they have funded.

- a. If the Public Agency decides not to own the IP in publicly-funded research, it should clearly determine what rights it will retain.
- b. If the Public Agency elects to own the IP, it should be clear about its purpose for owning the IP, the type and extent of protection as well as the rights to be accorded to 3rd parties

If it is in the national interest that the public agency should own the IP so as to facilitate the adoption of a standard or a certain “platform” technology, such technology could be accorded a “non-exclusionary, royalty-free” status.

7. Principle 6: Public Agencies should reserve a royalty-free, irrevocable, worldwide, perpetual and non-exclusive right to use IP (from publicly-funded R&D) for their own non-commercial and R&D purposes.

- a. This recognises that the research is funded by public monies, and therefore a Public Agency should not have to pay additional fees to use technology that it has already funded. This would also ensure that the Public Agency is not locked-out of the IP that was created with its funding support and that it has the freedom to carry out further R&D around the IP.

Annex B

ACKNOWLEDGEMENT OF PROGRAMMES & PROJECTS FUNDED BY THE NATIONAL RESEARCH FOUNDATION (NRF), PRIME MINISTER'S OFFICE, SINGAPORE

Purpose

1. The NRF Singapore supports various initiatives in research, innovation and enterprise through a range of funding programmes, some of which are effected through various agencies.
2. For accountability, outcomes from these programmes should appropriately acknowledge NRF Singapore as a funding body.
3. The following guidelines describe how NRF Singapore should be attributed for its programmes and projects.

Acknowledgement Guidelines

4. All funding recipients under NRF Singapore programmes/initiatives should attribute their awards/grants to NRF Singapore.
5. When, at any time, during or after completion of the programme and project, and agencies, administrative institutions and funding recipients publish or produce any works which relate to the research programme and project, they should also acknowledge NRF Singapore for its funding support.
6. Published materials include scientific publications, books, journals, articles, newsletters, brochures, posters, websites, conference materials, signage, case studies and reports.
7. Where relevant, efforts should be made by agencies receiving NRF funding to acknowledge NRF Singapore's funding support in media releases, media interviews, speeches, videos or other publicity/information platforms & opportunities.

Acknowledgement Platforms and Components

Website and Literature

8. Acknowledgements components on the web and literature of the Institutes of Higher Learning (IHLs), programme offices, and start-ups for the following initiatives or programmes funded by NRF Singapore, are as follows:

Funding Initiatives	Use of NRF Singapore Logo	Acknowledgement Statement* on Websites and in Literature
Directly administered by NRF Singapore (e.g. NRF Fellowship and Investigatorship, Competitive Research Programme)	Yes	Yes

Funding Initiatives	Use of NRF Singapore Logo	Acknowledgement Statement* on Websites and in Literature
Funded by NRF Singapore and administered by other agencies (e.g. Strategic Research Programmes, National Innovation Challenges)	Not necessary	Yes
CREATE	Not necessary	Yes

* The acknowledgement statement is as follows:

"This research/project/company/laboratory is supported by the National Research Foundation, Prime Minister's Office, Singapore under its <name of funding programme> (XX Award No. NRF-YY, if applicable).

Example:

"This research is supported by the National Research Foundation, Prime Minister's Office, Singapore under its Competitive Research Programme (CRP Award No. NRF-CRP 8-2011-7)."

If there is more than one funding source, the names of each source of funding are to be placed in order of the funding value, for example (assuming that the maximum funding is from NRF Singapore):

"This research/project/company/laboratory is supported by the National Research Foundation, Prime Minister's Office, Singapore under its < name of funding scheme >, < other funding source name > and < other funding source name >."

Events

9. Acknowledgements on the web and in print for events funded or supported by NRF Singapore are as follows:

Category	Use of NRF Singapore Logo
Supported by / Supporter (funded by NRF Singapore)	Yes
Supporting Organisation (supported by NRF Singapore e.g. publicity on NRF Singapore website)	Yes

10. Agencies, administering institutions and funding recipients should use their discretion in adapting the acknowledgement to suit the medium in which the research is featured.

Repository

11. Agencies and funding recipients are required to email copies of publicised materials that are related to programmes / projects funded by NRF Singapore to corpcom@nrf.gov.sg

Clarifications

12. For any clarification on acknowledgements, please contact NRF Singapore Corporate Communications at Tel No: (65) 6684 2900 or corpcom@nrf.gov.sg.

ANNEX C

FUNDS DRAWDOWN TEMPLATE FOR PROGRAMME OFFICE (OUTSIDE OF NRF) NON-ASSOCIATED OOE

Name of Programme Office:									
NATIONAL RESEARCH FUND DRAWDOWN FOR NON-ASSOCIATED OOE OPERATING COST OF PROGRAMME OFFICE (Reimbursement basis)									
FOR THE MONTHS OF _____ (e.g. Apr 2016 to Mar 2017)									
CONSOLIDATED STATEMENT									
FI Cost Centre	FI Description	Funding Initiative Budget	Revised Funding Initiative Budget	Funding Initiative <Current FY> Budget	Revised Funding Initiative <Current FY> Budget	Cumulative drawdown as at e.g. 31 Mar 16	Cumulative Expenditure as at e.g. 31 Mar 16	Actual Expenditure as at e.g. 1 Apr 16 - 31 Mar 17	Funds to be Credited/Disbursed e.g. 1 Apr 16 - 31 Mar 17
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h) = (g) + (f) - (e)
								Net Funds to be Received	0.00
CERTIFICATION									
We hereby certify that the particulars provided above are true and correct, and verified against the original source documents. The request has also been made in accordance to the NR Fund Guide.									
(signature & Date)									
Name of Senior Finance Officer									
(signature)									
Name of Executive Director of Programme Office or equivalent									
Date :									
# Enclosed Bank Statement									
Please credit the fund to:									
Bank Name:									
Bank A/C Holder Name:									
Bank A/C No.:									

Annex D

FLOW-CHART FOR SUBMISSION AND APPROVAL OF A FI



BROAD PRINCIPLES FOR FUNDING INITIATIVES

Funding Initiatives

All Funding Initiatives (FIs)	
Overview	<ol style="list-style-type: none"> 1. Clear documentation for each FI should be submitted to NRF for approval. The documentation should include the following: <ol style="list-style-type: none"> a. Objectives of each Funding Initiative: these must be clearly stated and aligned with NRF's principles of excellent science and cutting edge technology; significant economic/social benefits for Singapore; and robust management and governance. b. Internationally-benchmarked evaluation processes and properly governed approval processes with an appropriate system of independent checks and balances. c. Appropriate KPIs (both qualitative and quantitative) and measurable targets to evaluate success. d. Start and end dates of the Funding Initiative. e. A budget with proper justification. f. Clear timeline, appropriate milestones and deliverables, including how these are to be achieved. 2. Prior to submission to NRF, FIs must be endorsed by the respective Designated Authority (e.g. Domain EXCO Chair, or Permanent Secretary for Implementing Agency). 3. FIs should encourage the development of areas that have potentially high positive impact on the Singapore economy and/or society. 4. FI activities should primarily be undertaken in Singapore. They are expected to be impactful and central to the creation of technological innovations that will generate economic and societal payoffs for Singapore. There must be compelling reasons for FI activities to be conducted overseas. 5. Grants or incentive programmes should leverage systems and processes of existing schemes if available. 6. Funded projects should be regularly reviewed. Non-performing projects should be terminated so that funding can be redirected to deserving projects. For each FI, an annual review report should be submitted to NRF. 7. Where appropriate, a cost-sharing principle should be adopted. In principle, initiatives for more downstream R&D activities should have a higher co-funding element from industry (or potential implementation partners), commensurate with the lower risk of such activities.

	8. IP produced from NRF-funded programmes should reside within the research entity that created the IP, and IP exploitation and management should, to the best extent possible, be based in Singapore.
Programme Governance Structure	<ol style="list-style-type: none"> 1. Approval processes should provide for independent checks and balances. <ol style="list-style-type: none"> a. If the beneficiary of the funding is the agency administering the FI, or a related entity, the approval process should comprise independent, competent third parties. b. The team that implements the FI should be separate from the entity that decides on guidelines and policies allowing for deviations. The Implementation Agency should be jointly accountable for the FI.
Administrative Body	<ol style="list-style-type: none"> 1. The Programme Office should have defined roles, reasonably-scoped tasks and a reporting relationship to the Designated Authority (DA) (e.g. Domain EXCO Chair or Permanent Secretary for Implementing Agency). 2. The Programme Office should be kept lean, and leverage capabilities and resources of existing agencies to avoid duplication of functions and roles. 3. The Programme Office budget (including EOM, associated OOE and non-associated OOE), regardless of the source of funds, should be capped at 4% of the allocated programme budget, or at 5% of the committed programme budget, whichever is lower.
Funding Initiatives for Research	
Funding for Infrastructure /Equipment S\$0.5m - S\$5m	<ol style="list-style-type: none"> 1. Infrastructure/equipment may be funded as part of a research project but need must be properly justified. 2. Co-funding of such equipment between NRF and the hosting organisation can be considered, if appropriate, to demonstrate genuine need and commitment.
Funding for Infrastructure >S\$5m	<ol style="list-style-type: none"> 1. Infrastructure funded from the NR Fund will be considered as part of the national research infrastructure that should be made available for other parties to use. 2. The location of infrastructure should be determined via a competitive process. Factors affecting this decision should include how the infrastructure would be managed and used optimally and to what extent the location will promote activities that are linked to concrete initiatives. 3. Infrastructure should not be duplicated, especially if utilisation is low. 4. The hosting organisation should appoint competent professionals to be responsible for the infrastructure.

	<ol style="list-style-type: none"> 5. Use of national research infrastructure by other entities in Singapore should be charged based on recovering operating costs. 6. The hosting organisation should not claim a share of the IP developed from the use of the national research infrastructure by other entities in Singapore. 7. NRF and the NRF-appointed Programme Offices reserve the right to transfer ownership of the infrastructure.
Funding of R&D activities outside Singapore	<ol style="list-style-type: none"> 1. The primary purpose of the NR Fund is to develop research capability and capacity in Singapore. Activities that are supported by the NR Fund should therefore primarily be conducted in Singapore. There must be compelling reasons for such activity to be conducted overseas.
Competitive Funding Programmes	<ol style="list-style-type: none"> 1. FIs should encourage the training of younger researchers to do cutting-edge research. Interdisciplinary and collaborative use-inspired research should be encouraged through different calls for proposals that are open to public, private, and not-for-profit organisations. 2. Evaluation of all projects in competitive FIs should be based on merit and in accordance with international best practices⁵. Proposals should be submitted for international peer review. This would reduce potential conflicts of interest and allow bold proposals to be considered. 3. FIs should be administered using the common Integrated Grants Management System (IGMS) when ready⁶. 4. Co-funding is generally expected for projects in collaboration with or from the private sector. Projects which are more downstream should have greater industry collaboration and co-funding. FIs could include funding for scholarships tenable in locally-based IHLs. 5. Programme Offices must comply with the Guidelines and Terms & Conditions in <u>Annex L</u> for Competitive Research Grants. Any variation or deviation must be approved by NRF (at least at the Director level).
Manpower Training Funding Initiatives	
Visiting Experts	<ol style="list-style-type: none"> 1. Visiting experts should spend sufficient time in Singapore to build up a strong local research group in new areas with the assistance of a local PI(s) to ensure continuity. If the visiting expert plays a major role in the FI, he should be based in Singapore for at least 6 months each year.

⁵ Reference can be taken from the Global Research Council's (an international association of research funding agencies) principles for scientific merit review, which include expert assessment, transparency, impartiality, appropriateness, confidentiality and integrity.

⁶ In the meantime, the Research, Innovation and Technology Administration (RITA) system will be used for this purpose, wherever possible.

	<p>2. Co-funding is expected to demonstrate the interest and commitment of the host institution, which should also have necessary resources (manpower and infrastructure) to house the research group and eventually the permanent research team.</p>
<p>Training</p>	<p>1. There should be definite objectives in the training of research personnel in critical capabilities, with clear intention to apply the knowledge gained on a specific research project. 2. The co-sharing principle should be applied for the FI. 3. The Programme Office should propose definite milestones and KPIs for the Programme.</p>
<p>Scholarships</p>	<p>1. Scholarships funded by NR Fund should encourage Singapore's top students to pursue research. 2. The scholarship will include tuition fees and a reasonable stipend for the scholar.</p> <p>Local PhD scholarships</p> <p>3. Local PhD scholarships should be open to all deserving students based on merit, regardless of nationality. 4. Local PhD scholarships should aim to encourage more Singaporeans to take up PhD studies in Singapore. 5. Local PhD scholarships should be provided as part of an approved R&D project which will contribute to the research agenda of the Strategic Research Programmes. 6. Local PhD scholarships need not have a service commitment or bond, since awardees would already have contributed to research in Singapore while pursuing their PhD.</p> <p>Overseas Scholarships</p> <p>7. Overseas scholarships should be offered only at the PhD level. 8. Overseas scholarships should be restricted to a limited number and open to Singaporeans only. 9. Overseas scholarships should train top students interested to pursue a research career in a field where Singapore has a capability gap and our local universities do not have adequate expertise. The training should be done in the best research universities in that particular field. Programme Offices should specify a list of courses and corresponding universities applicable for the scholarship. 10. Overseas scholarships should have a service commitment to Singapore upon graduation, so that award holders return to Singapore to carry out research in academic, corporate or public research institutions.</p>

	<p>Company co-funded scholarships</p> <p>11. Company co-funded scholarships are open to deserving students of all nationalities, who will work in their sponsor companies in Singapore upon completion of their training to build the latter's R&D capabilities.</p> <p>12. Programme Offices should establish an appropriate selection and deployment process with the sponsor companies to ensure that suitable candidates are chosen and eventually appropriately deployed in relevant R&D projects in Singapore.</p> <p>13. The sponsor companies should pay at least 50% of the expenses incurred to demonstrate their commitment to this manpower development effort.</p>
<p>Industry-related Funding Initiatives</p>	
<p>Incubator Programme for Start-up Companies</p>	<p>1. This is a repayable grant scheme.</p> <p>2. The incubators perform the role of co-funding, nurturing and developing seed or embryonic stage technology companies who are their incubatees.</p> <p>3. Incubated companies will be given 5 years for repayment of the grant.</p> <p>4. Potential incubatees will be screened by the designated incubator based on (a) innovation or intellectual content; (b) potential for high growth; (c) scalability for the international market; (d) technical feasibility; and (e) potential for economic spin-offs to Singapore.</p>
<p>Test-bedding</p>	<p>1. Test-bedding projects should have a strong component of R&D that is conducted in Singapore.</p> <p>2. Co-funding is required of the user of the test-bed facility to demonstrate commitment.</p>

Annex F

FUNDING INITIATIVE SUBMISSION TEMPLATE FOR DOMAINS / HORIZONTALS

Funding Initiative (FI) Description

1. FI Overview
 - a. FI title and proposing domain / sub-committee / Lead Implementation Agency
 - b. Objectives and desired outcomes of the FI
 - c. How the FI fits into the domain / horizontal RIE2020 strategy
 - d. Competitive analyses (1. To map out existing capabilities / initiatives in Singapore, and how the FI will fit in. 2. To clearly state Singapore's competitive advantage compared to other countries, or how it can be developed.)
 - e. Value creation/capture strategy of FI (Plans to ensure economic and societal impact e.g. pathways to translation, commercialisation and/or testbedding opportunities.)
2. Management of FI
 - a. Governance and evaluation processes
 - b. Financial processes for disbursement of funds
 - c. Review and reporting processes
3. Proposed Budget and Timeline, Projected Annual Cashflow and Justifications for Key Items
4. Key Performance Indicators (KPIs)
 - a. KPIs for FI
 - b. Key milestones

Endorsement of FI

5. Endorsement by respective Designated Authority (e.g. Domain EXCO Chair or Permanent Secretary of Implementing Agency).
6. Endorsement by other stakeholder(s), if applicable.

Annex G

LETTER OF AWARD TEMPLATE FOR FUNDING INITIATIVES

<Date>

<Chairman / Co-Chairs of Designated Authority>

APPROVAL OF <NAME OF PROGRAMME> FUNDING INITIATIVES

- i. <Name of FI 1>
- ii. <Name of FI 2>
- iii. <Name of FI 3>

1. Following endorsement by NRF, [Approving Authority] has approved the proposal for the above <name of programme> Funding Initiatives (FI) submitted on <date>.

2. Below is a summary of the main guidelines and requirements that would need to be compiled with, in order to effect drawdown of funding for the FIs from NR Fund.

Governance Framework

3. The <Designated Authority> will ensure coordination and finalisation of the detailed parameters of the <name of programme> FIs. NRF's approval is required if revisions are made to:

- a. Goals and principles of any FI; and
- b. Budgetary implications, such as transfer or commitments of funds and extension of FIs beyond the original timeframe.

Budget and Cash Drawdown

4. The total approved budget of \$<amount> for the <number of FIs> FIs is to be utilised from <FY time frame>. The allocated amounts for each FI and financial processes are summarised in Table 1.

S/N	Funding Initiative	Total Allocation and Breakdown	Financial Process
1.	<Name of FI 1>	<approved amount>	Description of financial processes
2.	<Name of FI 2>	<approved amount>	Description of financial processes
3.	<Name of FI 3>	<approved amount>	

5. The Programme Office will be responsible for the monitoring of fund usage and compliance with applicable guidelines. Yearly/Quarterly⁷ cashflow projections for each FI will be sent to NRF using Annex A.

⁷ Yearly cashflow is applicable for non-associated OOE, while quarterly cashflow is applicable for non-programme office operating budget (i.e. research budget).

6. At the end of the funding period, the Programme Office will submit a Final Statement of Account to NRF and any unutilised fund will be returned to NRF. The Final Statement of Account shall be in the form specified in Annex B.

7. The Programme Office is to submit an annual progress report to NRF for each FI using the template provided in Annex C, with a final report to be submitted at the end of the last project within the FI.

8. The Programme Office is to submit an annual progress report to NRF of the <name of programme> as a whole, using the template provided in Annex D. A final report is to be submitted at the end of the last project from FIs in the Programme.

9. The Programme Office will keep track of the key performance indicators of the <name of programme> as an entire portfolio, in line with the expectations of <funding tranche e.g. RIE2015>. Please refer to Annex E for the template. This will be included in the <name of programme> annual progress report.

<Other Terms>

Yours sincerely,

<Signatory>

Enclosed:

- a. Annex A – Fund drawdown for FI
- b. Annex B – Final Statement of Account
- c. Annex C – FI Progress Report Template
- d. Annex D – Programme Progress Report Template
- e. Annex E – Key performance Indicators and Budget

FORM OF ACCEPTANCE

(Deadline:<date>)

To: National Research Foundation

1 CREATE Way
CREATE Tower, #12-02
Singapore 138602
Attn:

From: _____ Date: _____

We, the undersigned accept the funding of **<funding amount> for the <number> Funding Initiatives within the <name of programme>**, under the terms and conditions stipulated in the Letter of Award dated <date>.

By signing this Form of Acceptance, we agree to provide governance to the Programme Office to ensure that it shall abide by the said terms and conditions. .

Name: _____ Signature: _____

Designation: _____ Date: _____

Name: _____ Signature: _____

Designation: _____ Date: _____

Annex H

<u>FI Annual Budgeting Template</u>				
Name of Programme:				
Budget for FY _____				
DESCRIPTION	Approved Budget FYXX - 1 S\$'000	Revised Budget FYXX -1 S\$'000	Budget FYXX S\$'000	Variance S\$'000
Program Office				
Manpower Expenses*				
Operating Expenditure item #1**				
Other Cost (e.g. IP Mapping)				
TOTAL Program Office Cost				
Funding Initiative				
Funding Initiative #1				
Funding Initiative #2				
TOTAL Funding Initiative				
TOTAL				
CERTIFICATION				
I hereby certify that the budget request has been made in accordance to the National Research Fund Guide				
(signature)		(signature)		
Name of EXCO Co-Chairman:		Name of EXCO Co-Chairman:		
Date :		Date :		
Note: Please give justifications in separate attachment.				
*Please list down the staff and the various components for manpower cost (for non-civil servants only)				
**Please break down into various cost items (e.g. transport, office supplies etc)				

Annex I2

DRAWDOWN TEMPLATE FOR FUNDING INITIATIVES (REIMBURSEMENT)

Name of Programme Office:									
NATIONAL RESEARCH FUND DRAWDOWN FOR FUNDING INITIATIVES (FI) - Reimbursement									
FOR THE MONTHS OF _____ (e.g. Apr to Jun 2016)									
CONSOLIDATED STATEMENT									
FI Cost Centre	FI Description	Funding Initiative Budget	Revised Funding Initiative Budget	Funding Initiative <Current FY> Budget	Revised Funding Initiative <Current FY> Budget	Cumulative drawdown as at e.g. 31 Mar 16	Cumulative Expenditure as at e.g. 31 Mar 16	Actual Expenditure as at e.g. 1 Apr 16 - 30 Jun 16	Funds to be Credited/Disbursed e.g. 1 Apr 16 - 30 Jun 16
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h) = (g) + (f) - (e)
								Net Funds to be Received	0.00
CERTIFICATION									
We hereby certify that the particulars provided above are true and correct, and verified against the original source documents.									
The request has also been made in accordance to the NR Fund Guide.									
(signature & Date)									
Name of Senior Finance Officer									
(signature)									
Name of Executive Director of Programme Office or equivalent									
Date :									
# Enclosed Bank Statement									
Please credit the fund to:									
Bank Name:									
Bank A/C Holder Name:									
Bank A/C No.:									

Annex J

GUIDELINES FOR PROGRESS/FINAL REPORT

(to be submitted by the Programme Office annually and at the completion of the last project within the FI)

Description of Progress of the FI

1. Describe (a) current status of FI; (b) KPIs and milestones achieved to date, referenced against agreed-upon milestones and KPIs in the approved FI.
2. Highlight any delay or deviation from KPIs, deliverables, milestones or implementation methodology (e.g. changes to key staff), as well as remedial actions.
3. Describe major opportunities encountered and critical technical bottlenecks.

Outcomes and Output of the FI

4. Describe the outcomes and output that the FI has achieved. Interesting developments, such as innovative new products or important collaborations with industry or top research institutions, can be highlighted.

Problems Encountered

5. Describe briefly major issues faced in the course of administering the FI, such as any non-fulfilment of grant conditions.
6. Highlight any modification or variation to the scope of the approved project.

Overall Outcomes, Value Creation and Value Capture (Final Report only)

7. Describe succinctly the overall outcomes and output of the FI, including the realisation or otherwise of value creation and value capture.

Future Steps for the Funding Initiative (Final Report only)

8. Describe plans for ensuring sustainability of follow-ups from the FI outcomes.

Information on Fund Management and Exceptions

9. Describe the actual versus budgeted expenditures and highlight any variation to the annual and total approved budget of the FI.

Endorsement by Designated Authority

10. Endorsement and submission to NRF through the Designated Authority (e.g. Domain EXCO Chair, PS for Implementing Agency) of the Programme.

Audit

11. Upon NRF's request on a periodic basis, the annual progress and final reports must be accompanied by audit reports. The auditor(s) must certify that the funds are used in accordance with the relevant Guidelines, and Terms and Conditions that have been stipulated by NRF for the use of the funds.

ANNEX K

FINAL STATEMENT OF ACCOUNT FOR FUNDING INITIATIVES

Name of Programme Office:										
NATIONAL RESEARCH FUND FINAL STATEMENT OF ACCOUNT FOR FUNDING INITIATIVES (FI)										
CONSOLIDATED STATEMENT										
FI Cost Centre	FI Description	FI Start Date	FI End Date	Funding Initiative Committed Budget	Funding Initiative Current Year Budget	Cumulative received as at ()	Cumulative Expenditure as at ()	Expenditure incurred in the last quarter ()	Total Actual Expenditure incurred	Balance Funds To Be Returned to NRF / (To Be Disbursed)
						(a)	(b)	(c)	(e) = (b) + (c)	(f) = (a) - (e)
										0.00
									Less Bank interest earned for e.g. Jan - Mar 2014 [#]	
									Net Funds to be Received	0.00
CERTIFICATION										
We hereby certify that the particulars provided above are true and correct, and verified against the original source documents.										
The request has also been made in accordance to the NR Fund Guide.										
(signature & Date)										
Name of Senior Finance Officer										
(signature)										
Name of Executive Director of Programme Office or equivalent										
Date :										
# Enclosed Bank Statement										
Please credit the fund to:										
Bank Name:										
Bank A/C Holder Name:										
Bank A/C No.:										

Annex L

NRF GUIDELINES FOR COMPETITIVE R&D GRANT CALLS AND GRANT MANAGEMENT⁸

Objectives

1. This set of guidelines sets forth the policies and processes on the grant call, award and administration of competitive R&D grants funded from the National Research (NR) Fund, to ensure the effective management of the NR Funds.
2. Programme Offices are required to adopt these guidelines as a baseline for all competitive R&D grants that they manage and award that are funded from the NR Funds. Programme Offices may develop additional programme-specific guidelines, for which NRF's approval should be sought.
3. These guidelines are aimed at ensuring effective management of NR Funds to realise the following desired outcomes:
 - a. Excellent science and cutting-edge technology
 - b. Significant economic/social benefits
 - c. Robust management and governance

Eligibility Criteria

4. Researchers who are employees of eligible R&D organisations may apply for funding support for R&D projects to be carried out in Singapore. Eligible R&D organisations include all institutions of higher learning (IHLs), public sector agencies, R&D units in companies and not-for-profit hospitals and research laboratories in Singapore.
5. All R&D organisations must register with NRF or the Programme Office via the common Integrated Grants Management System (IGMS, when ready, or via the Research, Innovation and Technology Administration (RITA) system in the interim) in order to be eligible. At registration, each R&D organisation must designate a Director of Research, or equivalent, whose office will take up the following responsibilities to the Programme Office and NRF, with respect to all grant applications or funded projects of the organisation:
 - a. The R&D organisation supports the grant application and has no objection to the project being undertaken in its premises if funded;
 - b. The R&D organisation has the necessary resources and infrastructure to effectively administer operational processes (fund disbursements, progress reporting, inventory management, etc).; and
 - c. The proposed R&D team has the necessary competencies and track record to ensure successful completion of the proposed project.

Award Duration and Reviews

⁸ This list provides general guidance on competitive R&D grant calls and grant management. Programme Offices may tailor this list to suit a Programme's or FI's objectives. In the event of customisation, NRF's approval must be sought for the changes.

6. Funding support for awarded projects will be as stated in the approved FI.
7. At least one major progress review is required for each project that spans three years or more. Programme Offices are responsible for determining the number of such major progress reviews, the timing for the reviews and for convening an independent expert review panel to carry out the reviews. The findings of each major project progress review must be communicated to NRF.
8. To encourage interactions between the research community and industry, NRF encourages the organisation of workshops and seminars around major project progress reviews, for the project teams to present results of potential interest to other researchers and the industry.

Funding Support

9. The following R&D organisations will qualify for up to 100% funding support of approved qualifying direct costs of a project: IHLs, public sector agencies and not-for-profit hospitals and research laboratories. Companies and company-affiliated research entities qualify for up to 70% of a project's approved qualifying direct costs.
10. Please refer to the Appendix 1 to Annex L for the list of Non-fundable Direct Cost Items.
11. Indirect costs in research are those costs that are incurred for common or joint objectives and therefore cannot be identified readily and specifically with a particular sponsored research project, but contribute to the ability of the Institutions to support such research projects (e.g. providing research space, research administration, utilities), and not through the actual performance of activities under the sponsored research projects.
12. The Grantor does not directly manage indirect cost funding. PIs should refer to their Host Institutions for their policy of managing indirect cost funding.
13. Support for Indirect Costs:
 - a. Support for indirect costs is allowed only to Singapore-based Institutes of Higher Learning and not-for-profit entities.
 - b. 20% of the total qualifying direct costs will be allowed.
 - c. Not allowable unless specifically provided for in the grant and approved by the Programme Office based on the nature of research.

Call for Proposals

14. Programme Offices are responsible for preparing and calling for R&D proposals. A typical call for proposal could include the following:
 - a. a definition of the scope, objectives and intended outcomes of the call;
 - b. the research topics and areas of interest;
 - c. the estimated quantum and duration of an award;

- d. the criteria to be used to evaluate proposals;
- e. the evaluation process;
- f. the dates of submission and notification of awards; and
- g. any other relevant information helpful to applicants in the planning and preparation of their proposals.

15. A call for proposal must be lodged on the common IGMS (or on RITA in the interim). Programme Offices are responsible for disseminating information pertaining to their calls for proposals to the relevant R&D community and should provide sufficient time (at least 4-6 weeks) for the community to respond.

Application Process

16. Programme Offices must ensure that all proposals are written in English and lodged electronically via the common IGMS (or via RITA in the interim). Submissions which are incomplete, late or not endorsed (electronically by the corresponding R&D organisation) would not be considered. Principal Investigators must indicate if their proposal is also submitted for funding elsewhere and provide details on these other funding applications.

17. Programme Offices must ensure that the proposals submitted contain all the information needed for a proper and complete evaluation. In particular, proposals should address NRF's three evaluation criteria of i) excellent science and cutting-edge technology; ii) significant economic/social benefits to Singapore; and iii) robust management and governance. Relevant privileged or confidential information should be disclosed to help convey a better understanding of the proposed project. However, such information should be clearly marked in the proposal. Programme Offices must ensure that a non-disclosure agreement and a non-conflict of interest declaration are signed by reviewers and evaluation panellists who review proposals containing such confidential information.

18. Programme Offices could stipulate that each application must include at least three recommendations of international peer reviewers who could potentially be contacted to evaluate the proposal. The applicant must certify that the recommended reviewers:

- a. are experts in the subject matter capable of offering unbiased expert opinions on the scientific merit of the proposed project;
- b. have breadth and depth of knowledge of the field to evaluate the broader, multidisciplinary, societal and educational impact of the proposed project;
- c. have good knowledge of global developments in the field to evaluate the competitiveness of the proposed project;
- d. declare any relationship, direct or otherwise, with applicant (e.g., thesis advisor or advisee, current or recent (within past 24 months) research collaborator, colleagues in the same organisation, family, etc.); and
- e. have no financial interest in the proposed project.

Evaluation Process and Grant Approval

19. All NRF-funded R&D projects must be evaluated against the criteria described in section C.II.
20. Evaluation of proposals can be a single stage or multiple-stages, depending on the size of funding quantum. International peer reviews will be carried out via the common IGMS (or via RITA in the interim). Each proposal must be reviewed by international domain expert reviewers. The evaluation panel will consider the reports of the peer reviewers and through their collective expertise, make recommendations to the approval authority.
21. The entire evaluation process, from the close of the grant call to budget commitment (letter of award), should not exceed 9 months.
22. Award information for each round of call must be shared with all public research funding agencies. This is to encourage transparency in the grant process.
23. Programme Offices must ensure that unsuccessful applicants are provided detailed information on why their proposals were unsuccessful. The information provided would be helpful to the applicants in addressing the shortcomings of their proposals for resubmission if desired.

Letter of Award

22. Successful applicants will be informed by the Programme Office. Notifications of awards in the form of a Letter of Award (LOA), will be sent to the Director of Research for the respective Lead PIs' host institutions and copied to the Lead PI.
23. The letter of award should include the following:
 - a. Form of Acceptance
 - b. Schedules and Budget Details
 - c. Performance Indicators and Milestones
 - d. Guidelines on Managing a Grant
 - e. Terms and Conditions (refer to [Appendix 2 to Annex L](#))

Acceptance Form

24. The Acceptance Form must be acknowledged by all of the following:
 - a. the Director of Research (or equivalent),
 - b. the PI; and
 - c. the Co-Investigators.
25. Upon acceptance of the NRF grant, the PI and Host Institution are bound by these Terms and Conditions in the LOA. The PI or Co-Investigator(s) cannot also be the authorised officer representing the Institution. In such cases, another officer duly authorised by the management of the Institution shall approve on its behalf.
26. The Acceptance Form should be returned to the Programme Office within a pre-determined time frame from the date of the Letter of Award.

27. The official 'Start Date' and 'End Date' of the research project must be clearly stated in the Letter of Award.

Matters to Resolve before Proceeding with Research

Approvals from Ethics Committees

28. A copy of the necessary approval from the relevant board and committees (IRB, IACUC, GCP, etc) must be sent to Grantor, where applicable. Failure to do so will delay the disbursement of funds.

Research Collaboration Agreements

29. The Investigators are responsible for putting in place research collaboration agreements where and when applicable.

Disbursement of funds

30. A list of non-fundable direct cost items is provided in the Annex. Only items specified in the approved budget will be funded.
31. All expenditure should be incurred (based on invoice date) before the end of the Term.
32. In general, prudence should be exercised for all project costs.

EOM

33. Funding of research staff under the grant must comply with prevailing and consistently applied human resource guidelines of the employing Host/Partner Institution(s), regardless of the source of funds.
34. For manpower-related fund requisitions, update of all staff employed under the project must be provided, including those whose employment has ended.
35. All hiring Institutions (Host or Partner) and the hiring supervisor PI/Co-Is/PM shall employ or otherwise engage Research Assistants/ Research Technicians or staff of equivalent qualifications who are Singapore citizens and/or Singapore Permanent Residents to be deployed in the work under the Research.
 - a. For the purposes of this Clause 8, the term "Research Assistants" or "Research Technicians" or staff of equivalent qualifications shall mean research technicians, or staff of equivalent qualifications who participate in the Research by performing mainly technical tasks as well as providing support functions distinct from the work carried out by the Investigators.
 - b. Whilst Research Assistants/ Research Technicians may provide intellectual input to the Research, they are not required to be directly involved in the management of the Research or for providing leadership

- in the conception and creation of new knowledge, products, processes, methods and systems under the Research.
- c. At the point of entry, Research Assistants/ Research Technicians will typically not be required to possess PhD qualifications. For clarification, “Research Assistants” will not include nurses and other hospital workers whom may assist in the Research.
36. In the event the hiring supervisor PI/co-Is/PM is unable to comply with Clause 8 above, the PI must seek prior approval of the Grantor with proper justification and Research Assistants/Research Technicians or staff of equivalent qualifications of other nationality can be employed only if the request is supported.
37. For Research Fellows, the Institutions shall use reasonable efforts to employ or otherwise engage Singapore citizens or Singapore permanent residents unless the required expertise is not available or the skill of any foreign person is necessary for the performance of the Research.

Equipment and Other Operating Expenses (OOE)

38. Only items specified and approved in the Letter of Award will be funded.
39. All items claimed must comply with the Institution’s internal procurement processes, guidelines and policies.
40. Grantor’s approval must be sought prior to purchasing new equipment/OOE items that is not in the approved budget.
41. Grantor reserves the right to reject variation requests made retrospectively for equipment/OOE not listed in the Letter of Award.

Overseas Travel Related Expenses

42. It is the responsibility of the Lead PI/Co-Is to ensure that all travel expenses are in line with the Institutions’ consistently applied policy on travel, regardless of the source of funds. The Host Institution and Partner Institutions are to ensure that any travel undertaken is in relation to the grant only and for no other purpose.

Performance Bonus

43. Claims for staff performance bonus should be submitted within 6 months following the end of the Term. For Host Institutions that practise accrual of performance bonus according to its finance policy, balance funds should either be returned or claimed within 6 months if the pay-out comes after the end of the Term.

Requests for variations to the awarded grant

44. Grantor reserves the right to reject any claims that have resulted from project changes without prior approval from Grantor (in specific circumstances as stated in these guidelines).
45. Request for any variation should be made before the last 3 months of the original end of the Term. Retrospective variation requests will not be allowed, unless there is compelling justification for submission of a late variation request.

Virement between Votes

46. Grantor delegates the approval authority for the virement of funds between votes to the Host Institution, subject to a cumulative amount not exceeding 10% of the original total project direct cost value. For virements cumulatively above 10%, the approval authority remains as the Grantor.
47. Any virement into the EOM and Research Scholarship votes would require Grantor's approval, even if the cumulative amount is below 10% of the original total project direct cost value.
48. Inter-institutional virements, where applicable, require the Grantor's approval and acknowledgement from the director of research (or equivalent) for all Institutions involved.
49. Virement of funds into the Overseas Travel vote is not allowed. Overspending will not be reimbursed.
50. Variation from Research Scholarship to other budget category is not allowed, regardless of variation amount.

EOM

51. Grantor delegates the approval authority for manpower changes (i.e. increase/decrease in headcount, change in designation or scheme of projected hires, change in time commitment to the grant) to the Host Institution. Any virement into the EOM vote will require Grantor's approval. Updates should be provided when the fund requisition form is submitted to the Grantor.

Grant Extension

52. Request for grant extension should be made before the last 6 months of the original end of the Term. The PI must ensure sufficient funds in each vote to

support the extension request. Any variation requests necessary to meet the extension period must be made known as part of the extension request.

53. A one-off project extension should not be more than a total of 6 months. An extension beyond 6 months will require compelling justification. No additional funds should be given for any extensions.

Change in Lead PI/Co-Is (Not applicable for Talent Award)

54. Request for a change in the Lead PI/Co-Is must be made to Grantor and be endorsed by the grant administrative office of the existing and new Host Institutions. The new Lead PI/Co-Is must be an expert in that area and possess the necessary expertise to continue with the research work.

Audit and Progress Reports

Yearly Audit Report

55. The Host Institution is required to submit a Yearly Audit Report of the preceding financial year ending 31 March, by 30 Sept of each year.
56. The Yearly Audit Report must be prepared by each Institution's internal or external auditors and certified by the director of research and chief financial officer (or an authorised nominee).
57. The Yearly Audit Report should confirm that the Host Institution's requisitions are made in accordance with the Terms and Conditions of a Competitive Grant, and Guidelines.

Yearly Progress Report

58. The Host Institution is required to submit a Yearly Progress Report within 2 months from the end of the Financial Year (by 31 May). The requirement to submit a Yearly Progress Report is waived if the project start date is less than 3 months from the end of the FY.
59. Investigators may be required to give additional information about the progress of any grant if the information submitted is deemed to be inadequate.

Final Progress Report

60. The Host Institution is required to submit a Final Progress Report within 3 months following the end of the Term.

Final Statement of Account

61. The Host Institution is required to submit a Final Statement of Account within 6 months of the 'End Date' of the research project.

Debarring of Investigators

62. Investigators who fail to submit the Final Progress Report and/or Final Statement of Account within the stipulated timelines at paragraphs 35 and 36 will be debarred. Debarred Investigators will not be eligible to submit new grant applications for a minimum of 1 year starting from the end of the respective deadlines. The period of ineligibility will continue until the Final Progress Report and/or Final Statement of Account are submitted to Grantor.

Appendix 1 to Annex L

NON-FUNDABLE DIRECT COSTS FOR COMPETITIVE R&D GRANTS⁹

NON-FUNDABLE DIRECT COSTS

1. EOM Related Expenses

Type of Expenses	Description
General policy	<p>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 the consistently applied Host Institution's HR policies.</p> <p>This will extend to Host Institution 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.)</p> <p>All Manpower related costs that fall under Other Operating Costs (OOE) should be accurately reflected in the Budget.</p> <p>Fractional charging for staff costs based on time commitment to the project must be practised.</p>
Principal Investigators / Co-Investigators / Programme Managers EOM cost	Not allowable.
Unconsumed leave	Provision for unconsumed leave is not allowable.
Student Assistants / Interns	<p>Not allowable for students who are recipients of existing awards (or stipends) or students who are not residents of Singapore.</p> <p>Only full-time students enrolled in local institutes of higher learning qualify to be supported as a student assistant/intern.</p>

⁹ This list provides general guidance on items that are considered non-fundable direct costs. NRF or Programme Offices may tailor this list to suit a Programme's or FI's objectives. In the event of customisation, NRF's approval must be sought for the changes.

2. Equipment Related Expenses

Type of Expenses	Description
General policy	<p>No purchase of equipment is allowed unless specifically provided for in the grant approved by the Grantor.</p> <p>The procurement of such equipment must be made according to the formal established and consistently applied policies of the Host Institution.</p> <p>The invoices for all claims must be dated before the end of the Term.</p>
Cost of capital works, general infrastructure, general purpose IT and communication equipment, office equipment, and furniture and fittings	<p>Not allowable under direct costs, unless specifically provided for in the grant and approved by NRF.</p> <p>Examples of such costs are computers, office productivity software, PDAs, mobile phones, photocopier machines, workstations, printers, etc.</p>

3. OOE Related Expenses

Type of Expenses	Description
General policy	<p>Not allowable for expenses that are <u>not directly related</u> to the Research.</p> <p>All procurement of such items must be made according to the formal established and consistently applied policies of the Host Institution.</p>
Visiting Professors/Experts	Not allowable unless specifically provided for in the grant and approved by the Grantor. The visiting professor must be identified and his/her contribution to the project must be clearly defined and described in the proposal.
Audit fees	Not allowable. This includes both internal and external audit fees.
Entertainment & Refreshment	Not allowable.
Fines and Penalties	Not allowable.
Legal Fees	Not allowable.
Overhead Expenses	Not allowable unless specifically provided for in the grant and approved by the Grantor based on the nature of the research. This includes rental, utilities, facilities management, telephone charges, internet charges, etc.
Patent Application	<p>Not allowable.</p> <p>This includes patent application filing, maintenance and other related cost.</p>
Professional Membership Fees	<p>Not allowable.</p> <p>This applies to PI and Co-Investigators as well as all research staff funded from the grant.</p>
Software	Not allowable under direct cost unless specifically provided for in the grant and approved by the Grantor.
Professional fees (including fees to consultants)	Not allowable unless specifically provided for in the grant and approved by the Grantor.
Staff retreat	Not allowed.

4. Overseas Travel Related Expenses

Type of Expenses	Description
General policy	<p>Not allowable unless specifically provided for in the grant and approved by the Grantor.</p> <p>Conference participation should be directly relevant to the research area outlined in the project and necessary to accomplish project objectives.</p> <p>All travel must align to the existing and consistently applied institutions' travel policies regardless of the source of funds.</p>

5. Research Scholarship

Type of Expenses	Description
General policy	<p>Not allowable unless specifically provided for in the grant and approved by the Grantor.</p> <p>Postgraduate stipend must align with the prevailing rates set by the Ministry of Education. Postgraduate stipend and tuition support will not attract indirect costs.</p>
Undergraduate stipend and tuition support	Not allowable.

Appendix 2 to Annex L

TERMS AND CONDITIONS OF A COMPETITIVE GRANT

1. Definitions

1.1 In this Contract, unless the contrary intention appears: -

“Acceptance Form” means the Acceptance Form accompanying the Letter of Award which is to be completed by the Institutions and Investigators;

“Application” means the application for the Funding submitted to Grantor by the Host Institution for and on behalf of the Institutions collectively and given the grant number specified in the Letter of Award;

“Approved Proposal” means the Application to undertake the Research described therein as approved by Grantor (together with all modifications, amendments and revisions required by Grantor);

“Approved Third Parties” means the Grantor, any publicly funded research institute, research centre, university, polytechnic or other institute of higher learning based in Singapore;

“Assets” means all equipment, computer software, goods, products, databases, accessories, hardware and any other asset purchased or acquired using the Funds but does not include Research IP or consumables;

“Background IP” or “BIP” has the meaning set out in Clause 16.1.

“Collaborator” means any company, institution, incorporated body or other industry or academic collaborator, which is not an Institution or an Investigator but is to be engaged in the Research in collaboration with the Institutions or any of them;

“Co-Funder” means any other organization, institution, body, association (unincorporated or otherwise) or corporation which co-funds any part of the Funding under this Contract whether through or together with Grantor;

“Co-Investigator” means any person named in the Letter of Award as a “Co-Investigator” for the Research;

“Contract” means collectively these Terms and Conditions of A Competitive Grant, the Letter of Award, Application, Approved Proposal, Guidelines and Policies (which shall be communicated to the Institutions as applicable);

“Deliverables” means the tangible outcomes of the Research to be achieved by the Institutions and Investigators as specified in the Letter of Award;

“Final Progress Report” means the report described in Clause 12.7;

“Final Statement of Account” has the meaning set out in Clause 10;

“Funding” or “Funds” means the amount or amounts payable under this Contract for each project as specified in the Letter of Award;

“Grantor” means <NRF/MOE/NMRC/A*STAR> providing the Funding as set out in the Letter of Award;

“Guidelines” means the applicable guidelines for application for grants from the Grantor and includes all instructions to applicants (if any) and all application forms which are in use from time to time;

“Host Institution” means the body or institution or administering organisation named in the Letter of Award as the “Host Institution” as the body responsible for undertaking and managing the Research;

“Institutions” means collectively the Host Institution and the Partner Institutions and “Institution” shall mean any one of them;

“Intellectual Property (IP)” means all copyright, rights in relation to inventions (including patent rights and unpatented technologies), plant varieties, registered and unregistered trademarks (including service marks), registered designs, confidential information (including trade secrets and know-how), mask-works and

integrated circuit layouts, and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields;

“Investigators” means collectively, the Lead Principal Investigator, Team Principal Investigators and Co-Investigators;

“IRB” means institutional review board;

“Lead Principal Investigator” means any person named in the Letter of Award as a Lead Principal Investigator for the Research;

“Letter of Award” means the letter issued by Grantor preceding these Terms and Conditions of A Competitive Grant under which the grant of the Funds is made to the Institutions;

“Materials” means documents, anonymised patient samples (including tissue and sera), compilation of x-ray results, information and data stored by any means but excluding confidential patient data collated or acquired for the purposes of the Research;

“Milestones” means the agreed milestones that the Institutions and Investigators shall achieve as specified in the Letter of Award;

“Office of Research” means the office established by the Host Institution in accordance with Clause 4.2;

“Partner Institutions” means the bodies or institutions named in the Letter of Award as the “Partner Institutions” as the bodies responsible for working together with the Host Institution to undertake the Research;

“Policies” means any policy, instruction, standard operating procedure, regulation or rule issued by Grantor by itself or on behalf of or together with any Co-Funder in relation to the Funding provided under this Contract;

“Quarterly Requisition” means the requisition sent to the Grantor as described in Clause 8.1a.

“Research” means the project approved by Grantor as described in the Approved Proposal subject to any modifications or amendments thereto made in accordance with Clause 13;

“Research IP” has the meaning set out in Clause 16.2;

“Research Personnel” means the Lead Principal Investigator, Team Principal Investigators, Co-Investigators and all other employees, consultants and agents of the Institutions who will be engaged in and/ or perform the Research;

“Revenue” means gross consideration received by Institutions and/ or Grantor and/ or Research Personnel (as the case may be) from the licensing or commercialisation of any Research IP;

“Team Principal Investigator” means any person named in the Letter of Award as a Team Principal Investigator for the Research;

“Term” means the term of this Contract as specified in the Letter of Award;

“Yearly Audit Report” means the report described in Clause 12.2;

“Yearly Progress Report” means the report described in Clause 12.5.

2. Funding

- 2.1 The Funding will be provided during the Term in accordance with the provisions of this Contract. The Institutions shall use the Funding in accordance with this Contract.
- 2.2 The Institutions shall use the Funds for the Research only and not for any other purpose.
- 2.3 Each Investigator shall use his/her best endeavours to faithfully and diligently carry out or cause to be carried out all necessary research and development work and to devote all necessary time, resources and support to ensure the successful conduct, implementation and completion of the Research in

accordance with this Contract and consistent with internationally recognised good research practices and ethical standards. Each Institution shall ensure that the Research Personnel within their employ undertake and properly discharge the foregoing obligations.

- 2.4 Other than expressly allowed under the Contract, the Funds or any part thereof shall not be channelled to fund research and development activities overseas.
- 2.5 The Institutions shall not solicit or receive any funds or such other means of support for carrying out the Research from any other person, company, body, organisation, institution or agency (governmental or non-governmental) without Grantor's prior written consent, such consent not to be unreasonably withheld.

3. Accuracy of Information

The Institutions warrant that the information contained in the Application, all reports referred to in this Contract and any other information submitted to Grantor relating to the Research or the Funding are complete, accurate and not misleading. Without limiting the generality of the foregoing, the following are examples of incomplete, inaccurate and/or misleading information:

- (a) false or improper reports of financial accounts;
- (b) improper claims;
- (c) false or improper documents;
- (d) fictitious track records;
- (e) inflated reports of funds obtained from other sources for the Research;
- (f) omission of information on other funding sources for the Research;
- (g) false or inaccurate claims that proper approvals (including IRB approvals) have been obtained;
- (h) false or inaccurate reports on the progress of the Research and achievement of Milestones and Deliverables;
- (i) false or inaccurate reports on the status of collaborations with third parties relating to the Research; and
- (j) false claims in the publication record, such as, describing a paper as being published even though it has only been submitted for publication.

4. Administration of the Funding

- 4.1 The Institutions shall ensure that the Research is carried out with due care, diligence and skill and that the Funds are used in accordance with this Contract.
- 4.2 The Host Institution shall be responsible for administering and co-ordinating all matters relating to the Research, use of the Funds, communications with

Grantor, and reporting requirements for and on behalf of all the Institutions. For this purpose, the Host Institution shall be represented by its chief executive officer or equivalent office holder and establish an Office of Research to facilitate such responsibilities. Where its chief executive officer is also the Lead Principal Investigator, the Host Institution shall appoint another person from the governing body to which the chief executive officer reports to represent the Host Institution. Notwithstanding the foregoing, Grantor reserves the right to communicate directly with any Institution or Investigator on matters relating to this Contract.

4.3 The Host Institution shall be responsible for: -

- (a) ensuring that all Institutions and Research Personnel are aware of their respective responsibilities and that they comply with the terms and conditions of this Contract;
- (b) providing and/or procuring the basic facilities needed to carry out the Research as detailed in the Approved Proposal;
- (c) ensuring that the Investigators adopt the highest achievable standards, exhibit impeccable integrity and follow all prevailing guidelines on good research practices in Singapore (or internationally established guidelines, where applicable) in the conduct of the Research;
- (d) monitoring the scientific progress of the Research towards achievement of the Milestones and Deliverables and reporting to Grantor any deviations or anticipated problems which may materially affect the Research;
- (e) ensuring, where applicable, that local IRB, research ethics committee and multi-centre research ethics committee approvals are granted for the Research and that no research requiring such approval is initiated before it has been granted;
- (f) ensuring, where applicable, that the Institutions put in place proper procedures and guidelines to ensure regular and effective monitoring of the Research by the IRB or ethics committee;
- (g) ensuring, where applicable, that all ethics approvals for the conduct of studies using animals are granted including approvals of the relevant institutional animal care and use committee or such other body appointed to deal with ethical issues relating to the care and use of animals in research;

- (h) ensuring, where applicable, that all necessary regulatory licences or approvals for the Research have been granted prior to the commencement of any work under the Research;
 - (i) ensuring, where applicable, that any clinical trials (as defined under the Medicines Act) conducted as part of the Research are conducted in accordance with the Singapore Guideline for Good Clinical Practice as amended from time to time or such other applicable guidelines;
 - (j) ensuring that the work under the Research complies with all relevant current laws, government rules and regulations and other applicable guidelines and procedures including those introduced while the work is in progress;
 - (k) ensuring that all Research Personnel involved in animal research and in the breeding, housing and care of animals, are properly trained and supervised;
 - (l) ensuring that Grantor is immediately notified in writing of any development that will adversely affect the progress of the Research;
 - (m) ensuring that Grantor is immediately notified in writing upon cessation by any Investigator of active involvement in the Research or long leave of absence (e.g. sabbatical); and
 - (n) ensuring that Grantor is immediately notified in writing if any work carried out using the Funding diverges materially from the Approved Proposal.
- 4.4 Each Institution shall be responsible for ensuring that its clinician investigators working under the Research (if any) are aware that they are individually responsible for maintaining appropriate professional indemnity insurance coverage. For the avoidance of doubt, Grantor will not be responsible for the costs of such cover.
- 4.5 Each Institution must have in place adequate systems for ensuring the integrity of research carried out by its staff so that scientific misconduct (e.g. plagiarism, falsification of data, improper selection of data) and unethical behaviour can be prevented. Each Institution shall implement effective mechanisms for identifying scientific misconduct and/ or unethical behaviour and have in place clearly publicised and agreed procedures for investigating allegations of such scientific misconduct and/ or unethical behaviour. The Institutions shall report to Grantor all incidents or allegations of such scientific misconduct or unethical behaviour at the earliest opportunity.

- 4.6 Without prejudice to the Host Institution's obligations under this Contract, the Institutions and Investigators shall do all things necessary to enable compliance by the Host Institution of its obligations under this Contract.
- 4.7 The Host Institution shall manage the use of the Funding for indirect cost in accordance with the Guidelines. Investigators should refer to their Host Institution for their policy of managing such use. The Grantor does not directly manage indirect cost funding.

5. Commencement of Research

The Lead Principal Investigator shall inform Grantor if scientific work on the Research is unable to commence within three (3) months from the beginning of the Term.

6. Research Personnel

- 6.1 The Institutions shall ensure that the Research Personnel conduct the Research with due care, diligence and skill and comply with this Contract.
- 6.2 The Host Institution shall ensure each Institution and Investigator submit the Acceptance Form together with all other required documents to Grantor (either electronically or in hardcopy) within the time stipulated.
- 6.3 <Not applicable for talent awards> If any Investigator is unable to continue the Research, the Institution engaging such Investigator shall, subject to the written approval of Grantor, appoint a successor within a reasonable time. In seeking approval, the Institution must satisfy Grantor that the proposed successor has the requisite qualifications and skills to continue the Research. In the event that the Institution is unable to appoint a successor acceptable to Grantor within a reasonable time, Grantor shall have the right to terminate the Funding and/or the Contract.

7. Milestones and Deliverables

- 7.1 The Institutions and the Investigators shall use their best efforts to achieve the Milestones and Deliverables.

8. Disbursement of Funds

- 8.1 Disbursement of the Funds shall be made in accordance with the following provisions: -

- (a) Each Institution shall submit requisitions for direct and/or indirect costs for which the Funding is permitted to be used to Grantor for approval on a quarterly basis (“Quarterly Requisition”).
- (b) Each Institution shall include, with its Quarterly Requisition, detailed schedules of expenditure incurred for the previous quarter which are certified correct by its chief financial officer (or an authorised nominee).
- (c) Grantor will disburse the approved Quarterly Requisition amounts to the Host Institution. Partner Institutions shall issue a requisition to the Host Institution, and the Host Institution shall be responsible for collation of the requisitions and disbursement of funds to the Partner Institutions.
- (d) [Applicable only to relevant projects e.g. HBMS projects] Disbursement of the Funding shall be subject to the due performance of and compliance with this Contract by Institutions including, but not limited to, the securing of the relevant ethics approvals (eg. IRB) for the Research. The Institutions shall furnish satisfactory documentary evidence to Grantor that aforementioned requirement has been met.

9. Accounts, Audits and Monitoring

- 9.1 Each Institution shall keep and maintain full and detailed records and accounts relating to the Funding and the Research, including all items of expenditure incurred for or in connection with the Research.
- 9.2 The Host Institution shall be wholly responsible for monitoring the expenditure of the Funding by the Institutions, ensuring that the Funding is utilized in accordance with this Contract and certifying in the Yearly Progress Report the amount of Funding actually utilised and that the progress of the Research is satisfactory. In the event that the Funding is not utilised in accordance with this Contract, the Host Institution shall immediately inform the Grantor and provide full details of the same, and take all action necessary to minimize further use of the Funding and inform Grantor of the action taken.
- 9.3 Grantor may conduct ad hoc on-site reviews and audits to ensure that the terms of this Contract are complied with by the Institutions and that the reports submitted to Grantor are an accurate statement of compliance by the respective Institutions. In such event, Clause 11 shall apply.

10. Return of Unused Funds and Final Statement of Account

Each Institution shall return all unused funds (applicable for advance disbursement) and submit a final statement of account ("Final Statement of Account") to Grantor within six (6) months of the completion or termination of the Research, or termination of this Contract, or the end of the Term, whichever is the earliest, failing which Grantor may refuse to make further disbursements of the Funding and/ or disallow further claims from such Institution.

11. Access to Premises and Records

11.1 Pursuant to Clause 9.3, the Institutions shall, at all reasonable times during the Term and for seven (7) years after the expiration or termination of this Contract, grant Grantor and its authorized representatives: -

- (a) unhindered access to: -
 - (i) the Research Personnel;
 - (ii) premises occupied by the Institutions;
 - (iii) the Assets and Materials;
 - (iv) all accounts, records and documents in relation to the Research and Funding and its administration; and
- (b) reasonable assistance to:
 - (i) inspect the performance of the Research;
 - (ii) locate and inspect any accounts, records and documents in relation to the Research and Funding and its administration;
 - (iii) locate and inspect the Assets and Material;
 - (iv) make copies of any accounts, records and documents in relation to the Research and Funding and its administration and remove those copies; and

- (v) make copies of Materials (where applicable) and remove those copies.

11.2 The access rights in Clause 11.1 are subject to: -

- (a) the provision of reasonable prior notice by Grantor; and
- (b) the applicable Institution's reasonable security procedures.

11.3 In the event that Grantor is investigating a matter which, in its opinion, may involve an actual or suspected unethical conduct, or breach of the law or breach of the terms of this Contract, Clause 11.2 (a) will not apply.

11.4 Upon receipt of reasonable written notice from Grantor, the Institutions and Investigators shall provide any information relating to the Research required by Grantor for monitoring and evaluation purposes.

12. Reporting Requirements

12.1 The Grantee shall submit the reports and statements set out in this Clause 12 in accordance with the format required by Grantor. Notwithstanding Clauses 12.2 to 12.8, the Grantor may vary the reporting requirements of the Institutions in the Letter of Award. This includes but is not limited to requiring the Institutions to provide reports and statements within different deadlines or at more regular intervals. The provisions of this Clause 12 shall apply mutatis mutandis to such reporting requirements.

12.2 Time is of the essence with respect to the obligations set out in this Clause 12. In the event that an Institution fails to fulfil any requirement set out in this Clause 12 within the stipulated timeline or to demonstrate satisfactory progress in the Research, Grantor may discontinue further disbursements of the Funding.

Yearly Audit Report

12.3 Each Institution shall submit, on an annual basis no later than 30 September of each year, an audit report ("Yearly Audit Report") containing all relevant financial information on the Research for the preceding year ending 31 March, including but not limited to:

- (a) its use of Funds disbursed by Grantor;
 - (b) [applicable for advance disbursement] any unspent Funds that such Institution is required to return to Grantor;
 - (c) [applicable for advance disbursement] any unspent Funds that such Institution is carrying over into the next year.
- 12.4 The Yearly Audit Report must be prepared by each Institution's internal or external auditors and certified as correct by its director of research and chief financial officer (or their authorised nominees). In particular, each Institution shall confirm and state in the Yearly Audit Report that such Institution's requisitions for the Funding are made in accordance with the terms of this Contract.

Yearly Progress Report

- 12.5 The Host Institution shall submit to Grantor, on a Financial Year ("FY") basis, progress reports prepared by the Investigators in respect of the scientific progress and results of Research ("Yearly Progress Reports"). Yearly Progress Reports shall be submitted on or before 31 May (2 months from the end of the FY) or on such earlier date as reasonably required by Grantor. The requirement to submit a Yearly Progress Report is waived if the Term starts less than three (3) months from the end of the FY.
- 12.6 Grantor will review the Yearly Progress Report against the objectives of the Research as stated in this Contract. The Host Institution will be contacted for further information if the Yearly Progress Report is deemed inadequate or unsatisfactory.

Final Progress Report

- 12.7 The Host Institution shall submit to Grantor a final progress report ("Final Progress Report") within three (3) months from the end of the Term. The Final Progress Report shall contain, among other things, a complete list of the Assets. Grantor will review the outcomes against the objective(s) of the Research as stated in this Contract.
- 12.8 If the Host Institution fails to submit the Final Progress Report in accordance with Clause 12.7, the Investigators will not be eligible to submit new grant applications for a minimum of one (1) year from the Final Progress Report submission deadline. The period of ineligibility will continue until the Final Progress Report is submitted to Grantor.

13. Changes in Research

No material amendments, alterations or changes shall be made to the Research without Grantor's prior written approval. Save as aforesaid, the Host Institution shall notify Grantor in writing of all other amendments, alterations or changes made to the Research as soon as possible. For the purposes of this Clause, "material amendments, alterations or changes" shall mean those amendments, alterations or changes that have a material effect on the scope, nature, direction or purpose of the Research.

14. Insurance

Each Institution shall effect and maintain adequate insurance policies to cover any liability arising from its participation in the Research including, but not limited to, those required under any applicable legislation. If requested, an Institution shall provide Grantor with a copy of such insurance policies.

15. Publications of Results and Findings

- 15.1 Subject to the provisions of this Clause 15, the Institutions may publish, at any symposia, national, international or regional professional meeting or in any journal, thesis, dissertation, newspaper or otherwise of its own choosing, the findings, methods and results derived from the Research.
- 15.2 The Institutions shall ensure that all publications arising from the Research is made publicly available no later than twelve (12) months after the official date of publication. A copy of the publication shall be deposited in the Institution's open access repository (or any other institutional/subject open access repository), in accordance to the Institution's open access policy.
- 15.3 All publications shall acknowledge the funding support provided by Grantor and, where appropriate, the scientific and other contributions of the other Institutions and Research Personnel in accordance with established norms.

16. Intellectual Property Rights

- 16.1 Background Intellectual Property ("BIP") is any existing IP brought by the Institutions and/or Collaborators into the Research. Unless expressly agreed otherwise, this Research shall have no effect on BIP.
- 16.2 All Intellectual Property howsoever arising from the Research ("Research IP") shall, at the first instance, be the property of the Institutions in such

proportions as they may determine. This is without prejudice to any agreement that the Institutions may enter into with the Investigators or Research Personnel on ownership and exploitation of Research IP.

- 16.3 The Investigators shall use best efforts to identify and disclose to the Institutions details of all such Research IP.
- 16.4 The Institutions shall keep and maintain a full, comprehensive and updated list of all Research IP, which shall be made available to Grantor for inspection at any time.
- 16.5 The Institutions shall use best efforts to ensure that Research IP is properly managed and wherever feasible, fully exploited and commercialised. When required to do so by Grantor, the Institutions shall attend such meetings as Grantor may direct to discuss the potential for exploitation and commercialisation of Research IP.
- 16.6 The Institutions shall keep and maintain a full, comprehensive and updated set of statements, records and accounts documenting the Revenue from the commercialisation and exploitation of the Research IP.
- 16.7 [Applicable to projects awarded to private companies or of national interest] The Government and public sector agencies shall reserve a non-exclusive, non-transferable, perpetual, irrevocable, worldwide, royalty-free right and licence to use, modify, reproduce and distribute the Research IP for non-commercial, R&D and/or educational purposes only.

17. Third Party Collaborations

- 17.1 The Institutions may undertake work on the Research in collaboration with a Collaborator subject to this Clause 17. Notwithstanding Clause 2.5, the Institutions may also receive funds or any other means of support from a Collaborator for carrying out the research in accordance with this Clause 17.
- 17.2 The applicable Institutions shall, prior to commencing their collaboration with a Collaborator, enter into a written agreement with such Collaborator which is consistent with the obligations assumed under this Contract setting out, among other things: -
 - (a) the role of the Collaborator in the Research;

- (b) the provision of cash or in-kind contributions by the Collaborator for the Research; and
- (c) the work to be undertaken by the Collaborator and its scientific contributions.

17.3 All agreements with Collaborators must conform with the Collaboration Guidelines specified in the Annex. For the avoidance of doubt, Collaborators are not entitled to receive (directly or indirectly) any or any part of the Funds. The Host Institution shall keep Grantor informed of the progress on the work under the collaboration through the Yearly Progress Reports and the Final Progress Report.

17.4 The Host Institution shall be responsible for providing Grantor with copies of the relevant collaboration agreement between the Collaborator and the applicable Institutions including all amendments, modifications or revisions thereto.

17.5 [Applicable to projects awarded to private companies or of national interest.] The Institutions shall promptly inform Grantor if any aspect of the Research is the product of or otherwise relates to results obtained from a previous collaboration and the terms and conditions of any encumbrances on the relevant Research IP which may adversely affect Grantor's rights under Clause 16.

18. Ownership and Use of Assets

18.1 Subject to this Clause 18, title and ownership of the Assets and Materials will vest in the Institutions in such manner as to be determined amongst themselves. Save as provided in Clauses 18.2, 18.3 and 18.4, the Assets and Materials shall be used only for the Research. All Assets and Materials shall be physically located in Singapore and maintained within the control of the applicable Institutions during the Term.

18.2 The Institutions shall permit Approved Third Parties to access and use the Assets at no charge upon prior appointment provided that: (i) such access and use shall be subject to the availability of the Assets and there are no third party licensing terms restricting such use; and (ii) the Institutions shall be entitled to impose charges for the supply of materials, other services and utilities charges connected with the use of the Assets by the Approved Third Parties.

- 18.3 The Institutions may allow its employees to use the Assets for purposes other than the Research provided always that such use shall: (i) be restricted to research and development work within the Institutions; (ii) be allowed only during the times when the Assets are not being used for the Research; and (iii) not impede the Institutions from meeting its obligations and undertakings under this Contract.
- 18.4 Upon the expiry or termination of this Contract or end of the Research and for a period of three (3) years thereon, Grantor may require the Institutions to grant access for the use of any of the Assets and Materials by Grantor or any party identified by Grantor at no charge to the Grantor.

19. Completion/Extension

- 19.1 Unless earlier terminated in accordance with this Contract or if Grantor agrees in writing to an extension of time, this Contract shall end upon the expiry of the Term. Unless otherwise specifically provided in the Letter of Award, any application for extension of time shall be made to Grantor no later than six (6) months before the end of the Term unless there is compelling justification for submission of a late application for extension.

20. Termination

- 20.1 Grantor may terminate the Funding or this Contract upon the occurrence of any of the following events: -
- (a) any breach of the terms and conditions of this Contract by any Institution or any Research Personnel which is incapable of remedy;
 - (b) failure to remedy any breach of the terms and conditions of this Contract (where such breach is capable of remedy) by any Institution or any Research Personnel within ninety (90) days of written notification of such breach by Grantor;
 - (c) breach of ethics by any Institution or Research Personnel in the conduct of the Research including, but not limited to, ethical rules on patient safety;
 - (d) work carried out by the Institutions using the Funding diverges materially from the Approved Proposal;

- (e) misconduct relating to the Research;
- (f) any corruption and/or fraud by the Institution and/ or Research Personnel and/ or other staff relating to the Research or Funding;
- (g) stoppage of work on the Research;
- (h) cessation of any Investigator's active involvement in the Research;
- (i) appointment of receiver over any of the property or assets of any Institution;
- (j) taking possession by encumbrancer of any of the property or assets of any Institution;
- (k) entry into any voluntary arrangement by any Institution with its creditors;
- (l) liquidation of any Institution;
- (m) ceasing or threatening to cease to carry on business by any Institution;
or
- (n) Grantor is of the opinion that the continued performance of the Research is not or no longer viable.

The Host Institution shall immediately inform the Grantor upon its becoming aware of the occurrence of any of the above events.

20.2 In the event that this Contract is suspended or terminated pursuant to Clause 20.5, the Grantor shall meet any further amounts incurred under the Funding for work done under the Research up to the date of suspension or termination [following sentence applicable for advance disbursement] which have not been covered by disbursements of Funding already made by Grantor. Clause 8 shall apply mutatis mutandis to such claims.

20.3 In the event that this Contract is terminated pursuant to Clause 20.1, Grantor may, but shall not be obliged to, meet any further amounts incurred under the

Funding for work done under the Research up to the date of suspension or termination [following sentence applicable for advance disbursement] which have not been covered by disbursements of Funding already made by the Grantor. The provisions of Clause 8 shall apply mutatis mutandis to such claims. Notwithstanding anything to the contrary, in the event of termination pursuant to Clauses 20.1(c), (e), or (f), the Institutions agree that Grantor may require the Institutions to return all or some of the Funds previously disbursed by Grantor.

20.4 Upon termination of this Contract, the Institutions shall:

- (a) take all necessary actions to minimise further expenditure on the Research; and
- (b) [applicable for advance disbursement] return to the Grantor all monies that have not been expended under the Funding.

20.5 If any Institution is unable to comply with any term or condition of this Contract by reason of a Force Majeure event beyond the reasonable control of such Institution, all Institutions' obligations hereunder shall be suspended during the time and to the extent that the first Institution is prevented from complying therewith by the Force Majeure event provided that the Host Institution shall have first given written notice to Grantor specifying the nature and details of such event and the probable extent of the suspension. The affected Institution shall use its best efforts to minimize and reduce the period of suspension occasioned by the Force Majeure event and to remove or remedy such cause with all reasonable dispatch. Grantor may forthwith terminate the award by written notice to the Host Institution if such Force Majeure event continues for more than sixty (60) days. The following events shall be considered "Force Majeure" events, namely, national emergencies, war, embargoes, strikes, lock-outs or other labour disputes, civil disturbances, actions or inactions of government authorities, earthquakes, fire, lightning, flood or any other catastrophic event in Singapore caused by the forces of nature.

20.6 Clauses 3, 9, 10, 12, 14, 15, 16, 18, 20, 21 and 22 shall survive expiration or termination of this Contract howsoever caused. Clause 11 shall survive expiration or termination of this Contract howsoever caused for a period of seven (7) years.

21. Disclaimer of Liability

21.1 The Grantor shall not be liable to the Institutions or any Research Personnel involved in the Research or any other person whatsoever by reason of or arising from the terms and conditions of this Contract or its approval of the Research or the provision of the Funding or the conduct of the Research by,

or any breach, act or default of, the Institutions and Research Personnel. Each Institution shall assume all responsibility and liability for: -

- (a) all claims, losses, demands, actions, suits, proceedings, costs, or expenses whatsoever arising, suffered or incurred directly, from or out of any breach, act or default of such Institutions and/or its Research Personnel; and
- (b) all claims, losses, demands, actions, suits, proceedings, costs, or expenses whatsoever arising out of or in connection with any claim that the intellectual property rights of third party have been infringed as a result of the carrying out of the Research by such Institution and/or its Research Personnel.

21.2 The Grantor shall have no liability to the Institutions or the Research Personnel merely by reason of its provision of the Funding and the Institutions shall be responsible for all acts and conduct relating to the Research, including all IP, human and animal ethical issues.

22. Compliance with Law

The Institutions and Research Personnel shall, in performing this Contract, comply with the provisions of any relevant laws, statutes, regulations, by-laws, rules, guidelines and requirements applicable to it as the same may be amended or varied from time to time.

23. General

23.1 The grant of the Funding and this Contract is personal to each Institution. The Institutions shall not assign or otherwise transfer any of their rights or obligations hereunder whether in whole or in part without the prior written consent of Grantor.

23.2 No partnership or joint venture or other relationship between Grantor and the Institutions shall be constituted as a result of this Contract.

23.3 Any notice given hereunder shall be in writing and shall be deemed to have been duly given when it has been delivered personally at or posted to the address of the party to which it is required or permitted to be given at such party's address hereinbefore specified or at such other address as such party shall have designated by notice in writing to the party giving such notice.

- 23.4 No failure or delay by a party in exercising any of its rights under these provisions shall be deemed to be a waiver of that right. No waiver by a party of a breach of any provision shall be deemed to be a waiver of any subsequent breach of the same provision unless such waiver so provides by its terms. The rights and remedies provided herein are cumulative and not exclusive of any rights or remedies provided by law.
- 23.5 Singapore law shall govern this Contract in all respects.
- 23.6 The Institutions, Investigators and all Research Personnel shall be bound by and will conform with all Guidelines and Policies relating to the Funding and the Research as may be in force from time to time. The terms and conditions of all Guidelines and Policies are hereby expressly incorporated into this Contract by reference. The terms of the Guidelines and Policies are subject to revision from time to time at the absolute discretion of Grantor and it is the duty of each Institution and Investigator to be updated on the terms thereof following the Grantor's communication of such revisions to the Institutions.
- 23.7 Grantor shall be entitled to disclose or otherwise make available to any Co-Funder any information, reports or other subject matter pertaining to the Research that it receives from the Institutions or any Research Personnel.

24. Entire Agreement and Variation

- 24.1 This Contract constitutes the entire agreement between the parties and supersedes all prior communications, negotiations, arrangements and agreements, whether oral or written, between the parties with respect to the subject matter of this Contract.
- 24.2 Save where expressly superseded, if any part of this Contract conflicts with any other part, that part higher in the following list shall take precedence: -
- (a) the terms and conditions contained in the clauses of these Terms and Conditions of A Competitive Grant;
 - (b) the Annex(es);
 - (c) the Letter of Award;
 - (d) Approved Proposal;

- (e) Application;
- (f) Guidelines; and
- (g) Policies.

25. Third Party Contracts (Rights of Third Parties) Act (Cap 53B)

Save as expressly stipulated by Grantor in this Contract or in any Policy issued hereunder, the parties hereto do not intend that any term of this Contract should be enforceable, by virtue of the Contracts (Rights of Third Parties) Act (Cap 53B) or otherwise, by any person who is not party to this Contract.

Appendix 2.1 to Annex L

Collaboration Guidelines

Each Institution shall abide by the following guidelines when engaging in collaborations with any Collaborator pertaining to the Research.

1. The Institutions may engage in research collaborations involving any part or the whole of the Research with local or overseas Collaborators. Such collaborations, particularly with local Collaborators, are encouraged if the same enhance the Research and the results of the same.
2. The work in connection with the Research performed pursuant to the collaboration with the Collaborators should, to the extent possible, be carried out in Singapore. The Institutions are not permitted to contract out the whole or a substantial part of the Research to Collaborators.
3. Where possible, the Collaborators' staff should be resident in Singapore, or be re-located to Singapore to undertake the research, although it is recognized that this may not always be possible in the case of Collaborators based overseas. In particular, it is understood that where the Research (and consequently, the Funding) relate to a joint grant call with an overseas funding agency or organization, the Collaborators will be based overseas and the Collaborators' scope of work under the Research will be undertaken overseas.
4. The Collaborators are not permitted to receive, directly or indirectly, any part of the Funding, whether in cash or in the form of Assets acquired using the Funding or otherwise. All Assets acquired using the Funding must be located in Singapore and maintained within the control of the Institutions.
5. Collaborators accessing and using Assets acquired using the Funding may only do so pursuant to the terms of the research collaboration agreement that is put in place to govern the collaboration and must do so on terms which are not more favourable than that allowed to any other Singapore based organization (other than the Institutions).
6. The Institutions shall negotiate and agree upon ownership, intellectual property protection, commercialization and revenue sharing rights in respect of the Intellectual Property arising from the Research undertaken in collaboration with the Collaborators in accordance with internationally accepted standards and in the best interests of the Institutions and Singapore. All such rights shall be negotiated, agreed upon and stipulated in a formal research collaboration agreement with each Collaborator, which shall be consistent with each Institution's obligations under this Contract.

7. Minimally, the Institutions shall ensure that the Research IP shall be owned according to inventorship¹⁰ and that all revenues and other consideration derived from the use and commercial exploitation of the Research IP shall be shared between the Institutions and the Collaborators in accordance with the overall contributions¹¹ of the Institutions and the Collaborators. The Institutions shall not cede complete ownership of the Research IP to the Collaborator where the Collaborator or its staff has no inventive contributions without the prior written consent of Grantor- that is to say, in no event shall the Institutions or any one of them give up ownership where the Institutions' staff, employees, students, agents or contractors are inventors or creators of the Research IP in question.

8. The Institutions shall keep Grantor informed of its negotiations with the Collaborators and the terms of the agreement and details of the same in a timely fashion.

9. The Institutions must at all times reserve the right to use the Research IP for their own research and development purposes and to make the same available to the local research community at least for non-commercial research and development purposes.

¹⁰ If the Institutions' staff, students, employees or sub-contractors are the sole inventors/creators of the

Intellectual Property, then such Institutions shall own all of such Intellectual Property. If the Intellectual Property is jointly invented/created with the Collaborator's staff, students, employees or sub-contractors then such Intellectual Property may be jointly owned by the Institution concerned and the Collaborator as joint tenants.

¹¹ Contributions shall include inventive contributions, financial contributions as well as in-kind contributions, such as access to and use of background IP, equipment, plant and machinery, facilities, materials and other assets.