

Health and Medical Research Fund (HMRF) 2022 Open Call for Investigator-initiated Projects Briefing Session for Grant Applications

What do you need to have in your grant application for HMRF?

1 Feb 2023

2013 to present	Member of Grant Review Board (GRB), HMRF
2022 to present	Executive of Grant Review Board (GRB), HMRF

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Chair Professor, Division of Life Science
Director, Center for Chinese Medicine
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HMRF assessment

1. Originality
2. Relevance to the fund and thematic priorities
3. Significance of the research questions
4. Quality of scientific content
5. Credibility of design and methods
6. Applicability to local context
7. Translational potential / value

[HMRF website](https://rfs1.healthbureau.gov.hk/)

<https://rfs1.healthbureau.gov.hk/>



The screenshot displays the website for the Health and Medical Research Fund (HMRF). The header includes the title 'Research Fund Secretariat' and 'Health and Medical Research Fund (HMRF)'. A navigation menu on the left lists various sections such as 'Home', 'What's New', 'Council & Committees', 'Policies and Guidelines', 'Annual Reports', 'Call for Application', 'Funds', and 'Other Studies'. The main content area is titled 'Assessment Criteria and Rating a Grant Application' and includes a sub-section 'Assessment Criteria' which states that applications undergo a two-tier peer review process. A list of criteria is provided, including originality, relevance, significance, quality of content, study design, feasibility, ethics, translational potential, past performance, research capacity, budget justification, and value for money.

Research Fund Secretariat

Health and Medical Research Fund (HMRF)

Home
What's New
Council & Committees
Policies and Guidelines
Annual Reports
Call for Application
Funds
Health and Medical Research Fund
• About HMRF
• Funding Opportunities
• Research Areas and Themes
• How to Apply
• Research Grant Review System
• Principal Applicants and Administering Institutions' Area
• Forms
• FAQs
Other Studies

Funds >> Health and Medical Research Fund >> Research Grant Review System >> Assessment Criteria and Rating a Grant Application

Assessment Criteria and Rating a Grant Application

Assessment Criteria

Applications will undergo two-tier peer review process and be assessed according to the following criteria –

Health and medical research projects

- Originality of the research topic
- Relevance to the scope of funding and thematic priorities
- Significance of the research question
- Quality of scientific content
- Credibility for study design and method
- Feasibility of the intended project
- Research ethics
- Translational potential/value
- Past performance and track records of applicants
- Research capacity of administering institution
- Justification of requested budget
- Value for money

Reviewer's assessment

1. Originality and Impact
2. Research Questions, Aims and Hypotheses
3. Subjects and Study Methodology
4. Outcomes and Data Analysis
5. Research Capability
6. Budget
7. Ethical and Safety Considerations
8. Overall Comments and Conclusion (Strength and Weaknesses)
9. Overall Rating

**Research Council
Grant Review Board**
Assessment Form – Health and Medical Research Fund
To: Research Fund Secretariat (rfv@health.gov.hk)

ASSESSMENT FORM
(Please first refer to expand the content below.)

Reference No.: _____
Project Title: _____

PART A: DETAILED REMARKS ON THE INDIVIDUAL ASPECTS OF THE GRANT APPLICATION

This part, except Question 9, will be forwarded to the applicant for refining and improvement. The identity of the reviewer will not be released to the applicant. **Please critical and specific comments to assist the applicant and the Grant Review Board.**

Please comment on the proposed research in the following aspects:

1. **Originality and Impact:** What is the importance of the proposed research in its originality and potential impact in the area under study? How will the research benefit patients and/or the healthcare system? Will the research findings improve, population health, influence clinical practice and/or health services management, inform health policy in Hong Kong and elsewhere? Have the potential facilitators to this impact being achieved been identified?
Comment: _____
2. **Research Questions, Aims and Hypotheses:** How specific, clearly expressed and are the research questions, aims and hypotheses?
Comment: _____
3. **Subjects and Study Methodology:** (i) Is the proposed design and methodology for the study? (ii) Are sample sizes clear, justified, adequate and realistic? (iii) Are any preliminary data available? (iv) How feasible is the proposed time? Please also provide comments on the following (where applicable):
 - For proposals submitted under Advanced Medical Research (refer to Area on page 1 of applications), is this a clinical study which applies advanced technology including but not limited to biotechnology in medicine, use of drugs and treatment, mental health such as stem/cell-based, etc., to facilitate the translation of generated from health and health services or infectious diseases studies into clinical practice and to inform health policy?
4. **Outcomes and Data Analysis:** (i) Are the primary and secondary outcomes clearly defined? (ii) Have potential problems been anticipated and addressed? (iii) Is the statistical/analytical design appropriate and clearly explained?
Comment: _____
5. **Research Capability:** Comment on (i) the research team's expertise and track record (incl. principal investigator / project team members / collaborators) and (ii) the existing facilities of the institution where the research will be conducted.
Comment: _____
6. **Budget:** Is the request for research personnel, consumables, equipment and overall budget justified and reasonable? (For reference, 1 USD is equivalent to approximately 7.8 HKD)
Comment: _____

2020/21 Assessment Form Version: 4
Updated: June 2022

Score	Meaning
4	Recommended for support: Outstanding research proposal, highly original, impressive methodology and design
3	Recommended for support subject to clarifications/amendments: Minor revision and clarification required
2	Not recommended for support at present (resubmission possible) Not likely to make significant impact on health services or medical research without major revision.
1	Not supported: Unimportant and largely poor application. Lacking in originality, incomplete or out of scope application.

Grant application form

1. Project title
2. Abstract of project
3. Potential application
4. Applicants (project team)
5. Details of financial support requested
6. Other support, similar or related proposals and track record
7. Proposed project (Section 13 a-h)
 - a) Title
 - b) Introduction
 - c) Aims and Hypotheses to be Tested
 - d) Plan of Investigation
 - a) Subjects
 - b) Methods
 - c) Study design
 - d) Data processing and analysis
 - e) Existing Facilities
 - f) Justification of Requirements
 - g) Impact on People's Health and Health Services as well as Plan to Disseminate Research Findings to End Users
 - h) Key References
 - i) List of additional materials
 - j) Timetable of work
 - k) Research ethics / safety approval / consent for accessing third-party data
8. Report on previous grants from HMRF
9. Curriculum vitae and roles & responsibilities of all applicants

2022 HMRF Open Call – Research Proposal

13. PROPOSED RESEARCH PROJECT

This template applies to the following Area of Project* –

- Public health, human health and health services research
- Infectious diseases
- Advanced medical research

Please refer to paragraph 13 of *Explanatory Notes – Grant Application for Investigator-initiated Projects* for details of the format. The order of the items listed below should not be altered.

**For health promotion project, please use the health promotion template.*

a) Title: **(Section 13 a-h.docx)**

b) Introduction:

c) Aims and Hypotheses to be Tested:

d) Plan of Investigation:
[For advanced medical research, basic/pre-clinical research studies are not supported. Please state clearly how the study will focus on clinical studies and apply advanced technologies to facilitate the translation of knowledge generated from health and health services or infectious diseases studies into clinical practice and to inform health policies.]

[For project addressing the thematic priority of Implementation Science, please state clearly the proposed framework(s) / model(s) to analyse barriers and facilitators of implementation outcomes.]

[For seed grant application (i.e. grant ceiling is HK\$500,000), please state clearly the pre-set criteria to enable scale-up to a larger project and/or enhance the efficacy/effectiveness of existing practice.]

(i) Subjects (with justification on the sample size)

(ii) Methods

(iii) Study design

(iv) Data processing and analysis

(v) Potential pitfalls and contingency plans

[Word Count:]

e) Existing Facilities:

Assessment Criteria from Reviews



Assessment Criteria - Originality and Impact

Originality and Impact

- Is the research question novel and/or relevant to Hong Kong?
- Does the proposed research build on earlier studies or just repeat work in a new setting?
- Knowledge/research gap to be filled?
- What are the translational potential? i.e. impact on health policy, clinical practice and provision of health services in HK
- How do the results may contribute to the health services?

Assessment Criteria - Research Questions, Aims and Hypotheses

Research Questions, Aims and Hypotheses

- **Are the objectives specific and clearly stated?**
 - Preferably only one aim, no more than 3 objectives
- **Has this work been done before?**
 - PI should demonstrate why it needs to be replicated?
- **Specific aims and strong hypotheses?**
 - Study aim & key objective(s) consistent with title
 - Hypotheses on answers to research question
- **Is the literature review complete and up to date?**
 - a. Important or major references included? (Max 25 references)
 - b. any negative findings or competing hypotheses?
 - c. Does the review reflect the degree to the area investigated (extensive/minimal)?

Assessment Criteria - Design and Method

Subjects and Study Methodology (1)

- **Subjects are appropriate?**

- Be specific to type of study and outcome measures
- Explain source of subjects,
- Appropriate controls?
- Randomization, homogeneity of patient samples?

- **Sample size appropriate?**

- Expect calculations
- Plan for the number of recruitment of patient samples below expected target
- If fail to get close to target sample

- **Sampling Procedures**

Have the sampling procedures been adequately described?

- inclusion and exclusion criteria?
- criteria (age, sex, ethnicity, social-economic status, health status, etc.) and sufficient?
- statistical standardization procedures?
- sampling techniques in generalizing results to target time periods and/or target populations size?

Assessment Criteria - Subjects and Study Methodology

Subjects and Study Methodology (2)

- **Method stated clearly?**

- Methods appropriate to objectives? Balanced, not too weak, but not excessive
- Can the objectives be achieved with these methods?

- **Pilot study, preliminary data available?**

- Need to provide sufficient details of pilot outcomes (effect size/feasibility?)
- Make use of grants for pilots to show GRB that the project is feasible

- **Contingency plans, each objective or at multi-stage?**

- Include potential pitfalls and contingency plans in the application form

- **What evidence exists for the quality of the data in terms of its reliability and validity?**

Proposed measuring instruments:

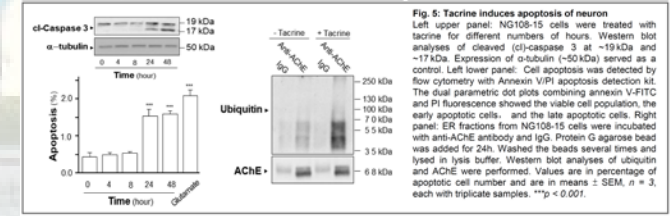
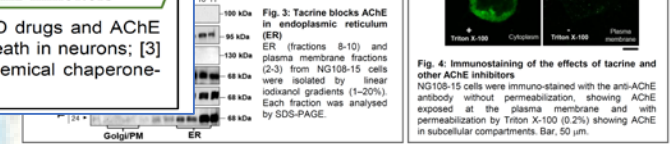
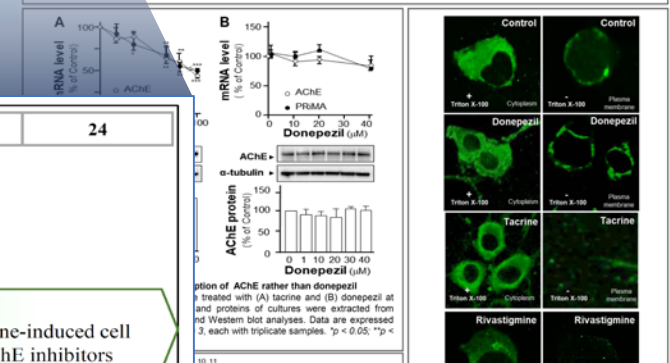
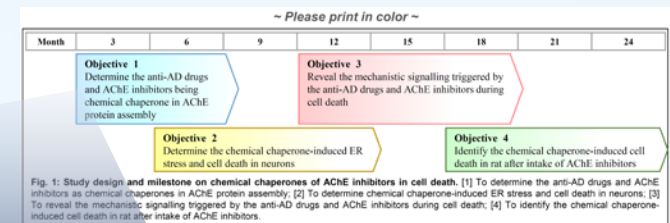
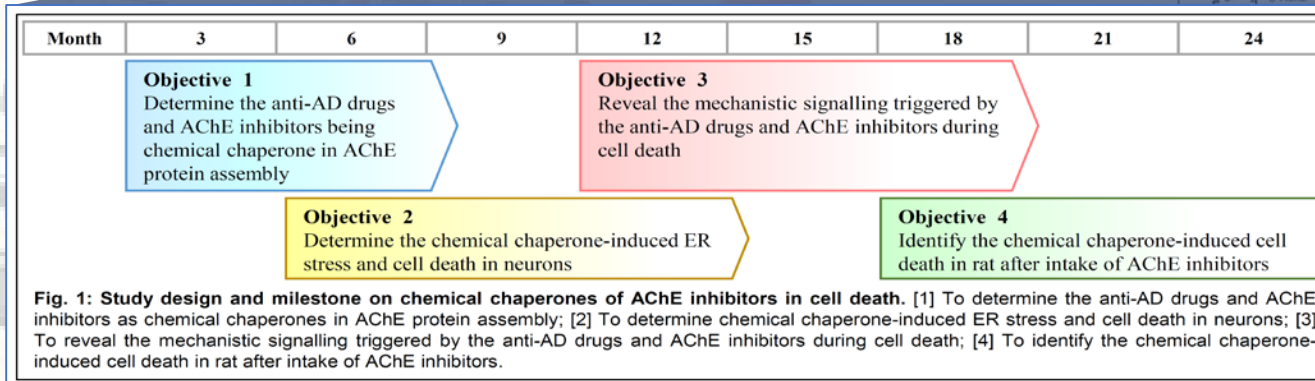
- well known?
- appropriate for achieving the objectives?
- validity of new or modified instruments?

Assessment Criteria - Subjects and Study Methodology

Subjects and Study Methodology (3)

List of additional materials:

- Include figures/tables, study instruments, questionnaires, consent forms, project protocol, implementation guidelines, diagrams of equipment, etc.
- Use color where applicable.
- Not more than 5 figures and/or tables.



Assessment Criteria - Outcomes and Data Analysis

Outcomes and Data Analysis

- **Primary and secondary outcome measures stated clearly?**
 - Need specifics and rationale
- **Data collection feasible/appropriate?**
 - Time per subject, respondent burden, consent, work schedule for research staff
- **Analysis resources feasible/appropriate (including equipment/ reagents/ statistician/ economist/ computers/ software)**
 - Are they all in place as needed?
- **Sufficient details of analysis provided?**
 - Ask statistician for advice on the proposal

Assessment Criteria - Research Capability

Research Capability

- **Description of Duties**

- Are the duties of the professional personnel named clearly described?
- Are research assistants necessary?
- Are the duties of these personnel defined?

- **Appropriateness**

- The PA and research team:
 - a. education, track records, experience, research expertise (grants, publications, scientific presentations), and past research focus on his/her work.
 - b. technical expertise needed? (methodological, statistical)?

Assessment Criteria – Schedule and Budget

Schedule and Budget

- **Appropriateness of Time Schedule:**

- Is the schedule clear, realistic, and achievable?

- **Budget:**

- Are personnel costs consistent with local remuneration levels?
- Equipment/Instruments in place (translated/validated/calibrated?)
- Are budgeted items are justified?
 - Manpower: number of staff, pay scale, duration, % effort (change request is needed if any discrepancies)
 - Other expenses (“consumables”): itemize in detail
 - Equipment: share your department resources; Government may at any time direct the institution to deliver and hand over the equipment to the Government
- GRB will trim unnecessary or redundant budgets
- Some projects have been terminated due to failure to recruit sufficient sample size; Part of the grant may need to be returned if the shortfall is not justified

Assessment Criteria – Ethical and Safety

Ethical and Safety

- Has the application been reviewed and approved by the ethics committee.
- Possible problems:
 - Confidentiality;
 - Consent, and
 - Protection of participants to disclosure, hazards, etc?
 - Potential physical & emotional risks to subjects
- Management of anticipated risks
- Trial certificate for drug trials

Assessment Criteria - Overall Comments and Conclusion

Strength and Weaknesses:

- Translational potential, feasibility, team, value for money, hypothesis, etc....

Translational potential

- How will positive results be translated into improved health services, changes in clinical practice, informed health policy?
- Translational value: non-academic impact in HK and international.
- HMRF research should be “useful” and “interesting”
- Identify end users of the proposal
- Involve research end users during the project
- Inform research end users after completion
 - dissemination plan - not limited in peer-reviewed publication, also consider workshops for frontline staff, newspapers/radio/TV/internet
- Inform the decision-makers in your field and let them know about these findings?

Value for Money

- Normal grant ceiling HK\$1,500,000.
- Seed grant not exceeding HK\$500,000 (for pilot studies, to test hypotheses, for PA who is a young researcher)

Overall hints, guidelines and reminders



Hints, Guidelines, Principles in Preparing Grant Applications

Pitfalls:

1. Lack of novelty – first study in HK/ a specific population is insufficient
2. Lack of understanding of current practice
3. Incoherent proposal
4. Too many aims/objectives/outcomes
5. Lack of hypothesis
6. Inappropriate design/research method
7. Sample size calculation not realistic
8. Lack of methodological details
9. Data analysis too general/do not match objectives
10. Premature/superficial qualitative data analysis
11. Unclear presentation/English

Hints:

1. Read the Guidance Notes & thematic priorities (<https://rfs.fhb.gov.hk/>)
1. Start early, discuss with and invite co-investigators
2. Apply for ethics approval/ trial certificate early
3. Try to carry out a pilot study for preliminary data
4. Give the rationale and answer before raising by the reviewer.
5. Reviewer's tendency is to recommend turning down many applications

Areas of project (HMRF considers funding)

1. *Public health, human health and health services*
2. *Prevention, treatment and control of infectious diseases*
3. *Advanced medical research in the specific*
4. *Health promotion*

Thematic priorities

1. *Infectious Diseases;*
2. *Non-communicable Diseases;*
3. *Primary Healthcare;*
4. *Preventive Medicine;*
5. *Telehealth and Advanced Technology;*
6. *Implementation Science.*



Thank you

Wish you success in HMRF applications