



**Australian Government**  
**National Health and Medical Research Council**



# **SYNERGY GRANTS**

## **2019 PEER REVIEW GUIDELINES**

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# 1. Introduction

The National Health and Medical Research Council (NHMRC) is responsible for managing the Australian Government's investment in health and medical research in a manner consistent with Commonwealth legislation and guidelines. NHMRC has a responsibility to ensure taxpayers' funds are invested appropriately to support the best health and medical research. Expert peer review assists us in fulfilling this responsibility.

This guide outlines the overarching principles and obligations under which the Synergy Grant peer review process operates, including:

- obligations in accordance with legislation and guidelines
- how to declare and manage conflicts of interest (Col)
- standards and best practice for the conduct of peer review.

This guide should be read in conjunction with the:

- NHMRC *Synergy Grants 2019 Guidelines*, which set out the rules, objectives and other considerations relevant to NHMRC funding.

## 2. Principles, conduct and obligations during peer review

The peer review process requires all applications to be reviewed by individuals with appropriate expertise. This carries an obligation on the part of reviewers to act in good faith, in the best interests of NHMRC and the research community and in accordance with NHMRC policies (outlined below).

### 2.1 NHMRC's Principles of Peer Review

NHMRC's Principles of Peer Review (the Principles) are high-level, guiding statements that underpin all NHMRC's peer review processes, and include:

- **Fairness.** Peer review processes are fair and seen to be fair by all.
- **Transparency.** Applies to all stages of peer review.
- **Independence.** Peer reviewers provide independent advice. There is also independent oversight of peer review processes by independent Chairs and Observers.
- **Appropriateness and balance.** There is appropriate experience, expertise and representation of peer reviewers assessing applications.
- **Research community participation.** Persons holding taxpayer-funded grants should willingly make themselves available to participate in peer review processes, whenever possible.
- **Confidentiality.** Participants respect that confidentiality is important to the fairness and robustness of peer review.
- **Impartiality.** Peer review is objective and impartial, with appropriate processes in place to manage real and perceived Col.
- **Quality and excellence.** NHMRC will continue to introduce evidence-based improvements into its processes to achieve the highest quality decision-making through peer review.

Additional details underpinning the Principles can be found at [Attachment A](#).

## 2.2 The Australian Code for the Responsible Conduct of Research

The [Australian Code for the Responsible Conduct of Research](#) (the Code) requires researchers participating in peer review do so in a way that is 'fair, rigorous and timely and maintains the confidentiality of the content'.

The Code can be found here: <https://nhmrc.gov.au/about-us/publications/australian-code-responsible-conduct-research-2018>.

## 2.3 Disclosure of Interests

NHMRC is committed to ensuring that interests<sup>1</sup> of any kind are dealt with consistently, transparently and with rigour, in accordance with Part 5, section 42A of the *National Health and Medical Research Council Act 1992* (NHMRC Act), sections 16A and 16B of the *Public Governance, Performance and Accountability Rule 2014*<sup>2</sup> and the [NHMRC's Privacy Policy](#).

This is to ensure that, where a material personal interest arises, the individual will not be in a position to influence, or be perceived to influence, the proper performance of the participant's responsibilities to NHMRC. The perception of an interest is as important as any actual interest.

### 2.3.1 What is a Conflict of Interest (Col)?

A Col exists where there is a divergence between the individual interests of a person and their professional responsibilities such that an independent observer might reasonably conclude that the professional actions of that person are unduly influenced by their own interests.

For NHMRC peer review purposes, interests may fall into the broad domains of:

- involvement with the application under review
- collaborations
- working relationships
- professional relationships and interests
- social relationships or interests
- teaching or supervisory relationships
- financial relationships or interests
- other interests or relationships.

Researchers frequently have a Col that cannot be avoided. Decision making processes in research often need expert advice, and the pool of experts in a field can be so small that all the experts have some link with the matter under consideration. An individual researcher should therefore expect to be conflicted from time to time, be ready to acknowledge the conflict and make disclosures as appropriate.

An outline of potential Col situations is provided for peer reviewers at [Attachment B](#).

### 2.3.2 Failure to declare an interest

The NHMRC Act requires interests to be identified and specifies the courses of action that apply when this requirement has not been met.

- Section 42A of the NHMRC Act requires members to disclose interests in matters being considered.

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<sup>1</sup> An 'Interest' is defined in section 4 of the NHMRC Act as meaning 'any direct or indirect, pecuniary or non-pecuniary, interest'. Under section 29 of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act), 'an official ... who has a material personal interest that relates to the affairs of the entity must disclose details of the interest'.

<sup>2</sup> Made under subsection 29(2) of the PGPA Act.

- Section 44B(3)(b) requires the Minister or the CEO to terminate the appointment of a member for failing to comply, without reasonable excuse, with the disclosure of interest requirements outlined in the NHMRC Act.

It is important for participants to inform NHMRC of any circumstances which may constitute an interest, at any point during the peer review process.

## **2.4 Research integrity issues**

The scrutiny of an application during peer review can sometimes identify possible research integrity issues (e.g. concerns about possible plagiarism, inconsistencies in the presentation of data, inaccuracies in the presentation of track record information). When such concerns arise, peer reviewers should raise these issues separately from the peer review process. Advice about how to do this is provided at [Attachment C](#). Peer reviewers should not discuss their concerns with other assessors, as this may affect the impartiality of the review.

When a peer reviewer identifies possible issues about research integrity, these are managed by NHMRC through a separate process. Applications that are the subject of a research misconduct allegation will continue to progress through NHMRC peer review processes while any investigations are ongoing. NHMRC liaises with the institution regarding the outcome of any investigation and, if necessary, will take action under the NHMRC policy on misconduct related to NHMRC funding (the Misconduct Policy) available on the NHMRC website at <https://nhmrc.gov.au/about-us/publications/nhmrc-policy-misconduct>.

### **2.4.1 Contact between peer reviewers and applicants**

Reviewers directly engaged with the peer review of an application must not contact applicants about their application. Similarly, applicants are not allowed to make contact or attempt to influence anyone about their application who is directly engaged with its peer review. Where a reviewer contacts an applicant, the consequences may be removal of the reviewer from the process and potential exclusion from future NHMRC peer review. Where an applicant contacts a reviewer, consequences could include exclusion of an application/s from consideration. In either case, contact between applicants and reviewers may raise concerns about research integrity and NHMRC may refer such concerns to the relevant Administering Institution.

## **2.5 Freedom of Information**

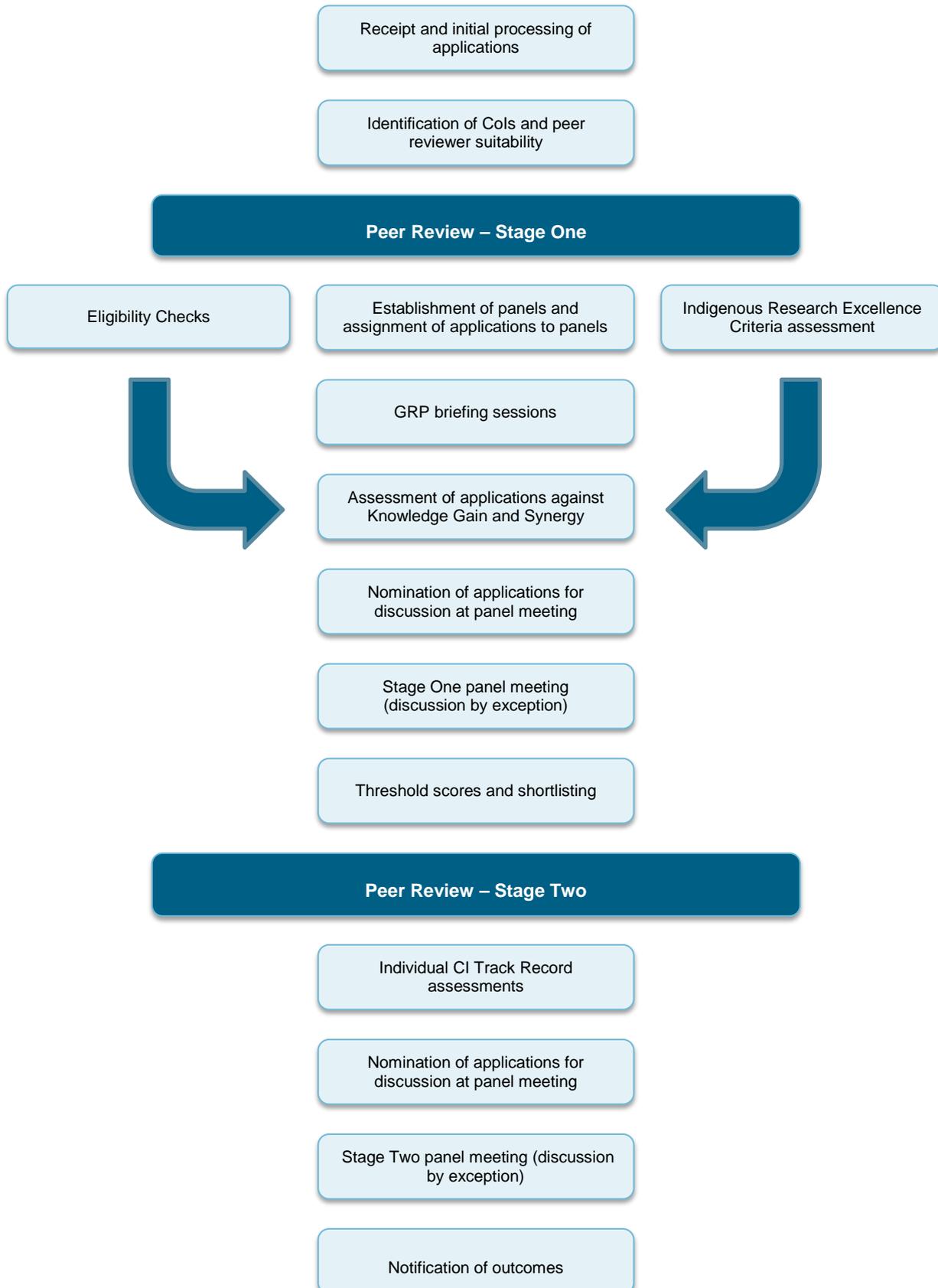
NHMRC is subject to the *Freedom of Information Act 1982* which provides a statutory right for an individual to seek access to documents. If documents that deal with peer review fall within the scope of a request, there is a process for consultation and there are exemptions from release. NHMRC will endeavour to protect the identity of peer reviewers assigned to a particular application.

## **2.6 Complaints**

NHMRC deals with any complaints, objections and requests for clarification on the peer review process that may be received from applicants. As part of these dealings, NHMRC may contact peer reviewers and/or Chairs involved to obtain additional information on particular application/s. Further information on the NHMRC complaints process can be found on the NHMRC website at: <https://nhmrc.gov.au/about-us/publications/nhmrc-complaints-policy>.

# 3. Synergy Grants Peer Review Process

## 3.1 Overview of the Synergy Grants Peer Review Process



**Table 1. Indicative timeline**

<b>Date</b>	<b>Activity</b>
1 May 2019	Deadline for Synergy Grants application submission
<b>Peer Review – Stage One</b>	
Early May 2019	Application eligibility review and confirmation
Early May 2019	Peer reviewers declare Conflicts of Interest (CoI) and suitability against applications
Late May 2019	Indigenous Research Excellence Criteria assessments obtained
Late May 2019	Establishment of panels and assignment of applications and peer reviewers to panels
Early June 2019	GRP briefing sessions
Early to late June 2019	Peer reviewers assess applications and submit scores against Knowledge Gain and Synergy Assessment Criteria for each assigned application
Early July 2019	Provisional Stage One ranked lists distributed to panels
Early July 2019	Due dates for nominating applications for discussion at panel meetings: Knowledge Gain and Synergy criteria only
Mid July 2019	Stage One panel meeting: Knowledge Gain and Synergy criteria only
Late July 2019	The most competitive applications, which also meet threshold requirements, are shortlisted
Early August 2019	Non-competitive applicants notified
<b>Peer Review – Stage Two</b>	
Early August 2019	Assignment of CI Track Record assessments to peer reviewers
Early to late August 2019	Peer reviewers submit scores against individual track records of CIs assigned to them
Early September 2019	All CI Track Record scores provided to peer reviewers
Early September 2019	Due dates for nominating applications for discussion at panel meeting: Track Record criterion only
Mid September 2019	Stage Two panel meeting: Track Record criterion only
November 2019*	Notification of Outcomes

\*Dates are indicative

### 3.2 Roles and Responsibilities

The roles and responsibilities of those participating in the Synergy Grants peer review process are identified in the table below.

**Table 2. Synergy Grants peer review participants table**

Roles	Responsibilities
<p><b>Panel Chair (Chair)</b></p>	<p>The Chair's role is to ensure NHMRC's procedures are adhered to and that fair and equitable consideration is given to every application being discussed at the panel meeting.</p> <p>Chairs are independent of the review of applications and must manage the process of peer review in accordance with this Guide.</p> <p>Prior to the panel meeting, Chairs will:</p> <ul style="list-style-type: none"> <li>• familiarise themselves with this document and other material as identified by NHMRC staff</li> <li>• identify and advise NHMRC of all real or perceived CoIs they have with applications assigned to their panel</li> <li>• familiarise themselves with ALL the applications to be considered by their panel, excluding those for which they have declared a high CoI.</li> </ul> <p>During the panel meeting, Chairs will:</p> <ul style="list-style-type: none"> <li>• take appropriate action for each declared CoI</li> <li>• keep discussions on time and focussed</li> <li>• ensure NHMRC procedures are followed</li> <li>• assist peer reviewers with their duties and in understanding what is expected of them</li> <li>• promote good engagement by peer reviewers in all discussions</li> <li>• ensure that all peer reviewers consider 'relative to opportunity', including career disruptions, when discussing applications</li> <li>• ensure the discussion leads to an outcome where the applications are appropriately considered against the Synergy Grant Assessment Criteria using the Synergy Grant Category Descriptors</li> <li>• ensure the panel consistently considers the assessment against the Indigenous Research Excellence Criteria for applications with an Aboriginal and Torres Strait Islander health focus</li> <li>• ensure peer reviewers are satisfied with the consistency and appropriateness of discussions for each application</li> <li>• ensure peer reviewers are satisfied with each meeting's deliberations</li> <li>• record and notify NHMRC of any requests for clarification or advice</li> <li>• approve relevant Meeting Attendance Record sheets.</li> </ul>
<p><b>Peer reviewers</b></p>	<p>Prior to the panel meeting, peer reviewers will:</p> <ul style="list-style-type: none"> <li>• familiarise themselves with this Guide and other material as identified by NHMRC staff</li> <li>• identify and advise NHMRC of all real or perceived CoIs they have with applications assigned to their panel</li> <li>• provide a fair and impartial assessment against the Synergy Grant Assessment Criteria for each application assigned to them where no high CoI exists, in a timely manner</li> <li>• when assessing track record, consider research achievements 'relative to opportunity', including any career disruptions</li> <li>• consider the assessment against the Indigenous Research Excellence Criteria provided for applications with an Aboriginal and Torres Strait Islander health focus</li> <li>• review scores from all peer reviewers for all applications assigned to them</li> <li>• advise NHMRC of any applications they choose to nominate for discussion by exception at the panel meeting.</li> </ul> <p>During the panel meeting peer reviewers will participate in the discussion for each application nominated for discussion, where no high CoI exists.</p>
<p><b>Senior NHMRC Staff</b></p>	<p>NHMRC staff with appropriate expertise may be involved in:</p> <ul style="list-style-type: none"> <li>• reviewing the assignment of applications and peer reviewers to panels</li> <li>• assisting and advising on the peer review process.</li> </ul>

Roles	Responsibilities
<p><b>NHMRC Staff</b></p>	<p>Under direction from the CEO, NHMRC staff will be responsible for overall administration of the peer review process and for the conduct of specific activities:</p> <p>Prior to the panel meeting NHMRC staff will:</p> <ul style="list-style-type: none"> <li>• approach potential peer reviewers and Chairs</li> <li>• rule on level of declared Col</li> <li>• act as the first point of contact for peer reviewers</li> <li>• provide briefings to peer reviewers</li> <li>• determine eligibility of applications</li> <li>• assign applications and peer reviewers to the appropriate panel</li> <li>• prepare provisional ranked lists for peer reviewer consideration.</li> </ul> <p>At the panel meeting NHMRC staff will:</p> <ul style="list-style-type: none"> <li>• assist the Chair in running the discussions</li> <li>• manage the Col process, including maintaining accurate records, ensuring all participants (including community observers) are aware of all declared Col</li> <li>• ensure that all peer reviewers are provided with the necessary information to review each application</li> <li>• maintain scoring records for each application</li> <li>• act as the first point of contact for peer reviewers and community observers</li> <li>• seek feedback from Chairs, peer reviewers and community observers on improvements for future processes.</li> </ul>
<p><b>Indigenous Health Research Peer Reviewer</b></p>	<p>Indigenous Health Research peer reviewers will:</p> <ul style="list-style-type: none"> <li>• review the relative strength of each application in terms of how well it addresses NHMRC’s Indigenous Research Excellence Criteria (<a href="#">Attachment D</a>).</li> </ul>
<p><b>Community Observer</b></p>	<p>At the panel meeting observers will:</p> <ul style="list-style-type: none"> <li>• identify and advise the Chair of all real or perceived conflicts they have with applications to be discussed</li> <li>• monitor the procedural aspects of the meeting</li> <li>• provide feedback to NHMRC on the consistency of procedures across meetings.</li> </ul> <p>Observers may raise issues of a general nature for advice or action as appropriate with NHMRC staff.</p> <p>Observers are subject to the same Col requirements as panel members. Where a high Col exists, the observer will disconnect from the meeting.</p>

### 3.3 Reviewing Synergy Grant applications

All Synergy Grant applications are assessed against the Synergy Grant *Assessment Criteria* as set out at [Attachment E](#) using the *Category Descriptors* at [Attachment E](#). Applications that are accepted by NHMRC as relating to the improvement of Aboriginal and Torres Strait Islander health (see section 3.3.1) are also assessed against the *Indigenous Research Excellence Criteria* as set out in [Attachment D](#). Further guidance on assessing applications against the *Indigenous Research Excellence Criteria* is provided at [Attachment G](#).

#### 3.3.1 Identification of applications with an Aboriginal and Torres Strait Islander health focus

Applications relating specifically to Aboriginal and Torres Strait Islander people's health will be identified by information provided in the application. Researchers with Aboriginal and Torres Strait Islander health expertise will confirm that these applications have at least 20% of their research effort and/or capacity building focussed on Aboriginal and Torres Strait Islander health.

For applications confirmed as relating specifically to Aboriginal and Torres Strait Islander health research, NHMRC will endeavour to obtain at least one assessment against the *Indigenous Research Excellence Criteria* from an assessor with expertise in Aboriginal and Torres Strait Islander health.

The assessment against the *Indigenous Research Excellence Criteria* will be considered by peer reviewers when scoring ([Attachment D](#)).

For further information see Guidance for Assessing applications against the *Indigenous Research Excellence Criteria* at [Attachment G](#).

#### 3.3.2 Receipt and initial processing of applications

NHMRC staff will verify that Synergy Grant applications meet eligibility criteria. Applicants will be advised if their application is ineligible. However, in some instances these applications will remain in the peer review process until their ineligibility is confirmed. Eligibility rulings may be made at any point in the peer review process.

#### 3.3.3 Identification of CoIs and peer reviewer suitability

Peer reviewers will be provided with an overview of applications and will declare their CoIs in accordance with the guidelines provided at Section 2.3 and [Attachment B](#).

Some peer reviewers may have a CoI for which they require a ruling. For these, NHMRC will assess the information in the declaration made by the peer reviewer and specify a level of peer review participation for the reviewer.

Peer reviewers are required to include sufficient detail in their declaration to ensure an accurate CoI assessment can be made by NHMRC staff. If the Chair or a peer reviewer is uncomfortable with a ruling level, they can raise this with NHMRC staff and request a review.

CoIs must be declared at the beginning of the peer review process. However, CoIs may be declared at any stage of the peer review process if new conflicts become apparent. Any peer reviewer who declares or has a 'high' CoI ruling will not be able to participate in the review of that application, but they can provide scientific advice, on request from the Chair, if required.

Peer reviewers are also required to select their level of peer reviewer suitability for applications including suitability for assessing Track Records of Chief Investigators (CIs), based on the information provided by NHMRC.

#### 3.3.4 Peer Review - Stage One

Stage One of Synergy Grants peer review is the assessment and scoring of two of the three assessment criteria: Knowledge Gain and Synergy. At this stage, peer reviewers will not have access to Track Record information to ensure independent assessment against these criteria.

#### **3.3.4.1 Establishment of panels and assignment of applications to panels**

Taking into account CoIs and peer reviewer suitability, NHMRC staff will assign applications and peer reviewers to panels of approximately fifteen members. The number of panels formed will depend on the total number of applications received. Each panel will be multidisciplinary and consist of members across a range of Broad Research Areas. Each application will be assigned up to five reviews.

#### **3.3.4.2 GRP briefing sessions**

NHMRC will provide briefing material for peer review participants that will provide further detail of duties and the responsibilities associated with the Synergy Grants peer review process. This will be made available to peer reviewers prior to reviewing applications. Further information may be provided as necessary.

#### **3.3.4.3 Assessment of applications against Knowledge Gain and Synergy**

Peer reviewers will be given access to applications (where no high CoI exists) and will be required to review and subsequently provide their scores to NHMRC. During Stage One, peer reviewers will assess applications against the Knowledge Gain and Synergy criteria using the *Synergy Grants 2019 Assessment Criteria (Attachment E)* and associated category descriptors. (see Table 6 of *Attachment F*). With respect to multidisciplinary, diversity and collaborative gain, only the CoIs of the proposed research team will be assessed; the Associate Investigators (AIs) are not considered for this criterion. Further guidance on the assessment of Synergy Grant applications and the *Concept of 'Synergy'* can be found at *Attachments H and I*.

Peer reviewers should not discuss applications with other peer reviewers. This is to ensure peer reviewers provide completely independent scores.

Peer reviewers must ensure scores are completed by the nominated due date. If peer reviewers are unable to meet this requirement, they must contact NHMRC promptly to discuss alternative arrangements.

Peer reviewers' scores for the Knowledge Gain and Synergy criteria will be used to create a provisional ranked lists for each panel (tailored for CoIs). This list will be made available to peer reviewers prior to the panel meeting.

#### **3.3.4.4 Enhancing reproducibility and applicability of research outcomes**

As outlined in the Code, peer reviewers are required to consider the general strengths and weaknesses of the experimental design of the proposal to ensure robust and unbiased results. Assessment of the experimental design should include consideration of the scientific premise of the proposed research (i.e. how rigorous were previous experimental designs that form the basis for this proposal), effect size and power calculations to determine the number of samples/subjects in the study, sex and gender elements of the research to maximise impact and any other considerations relevant to the field of research necessary to assess the rigour of the proposed design.

#### **3.3.4.5 Nominating applications for discussion at panel meeting (Knowledge Gain and Synergy)**

Peer reviewers will each be given the opportunity to nominate one application for discussion by exception at the panel meeting. Peer reviewers must outline their reason for nominating an application for discussion and what issues they would like to discuss with the panel. Peer reviewers will be required to submit their nominations to NHMRC by the nominated date. NHMRC will then circulate a list of applications nominated for discussion to peer reviewers in advance of the panel meeting. The nominated applications will be the only applications discussed by the panel. NHMRC may identify applications for discussion, or remove applications from the nomination process.

If the panel does not nominate any applications for discussion, the panel meeting will not be required. NHMRC will confirm in writing that no meeting is required.

The discussion by exception process gives peer reviewers the opportunity to discuss applications with their panel and possibly rescore against the Knowledge Gain and/or Synergy criteria. This is not a "rescue" process. Any applications that are re-scored will be fed back into the provisional ranked list – they are not automatically shortlisted.

#### **3.3.4.6 Stage One panel meeting**

It is expected that the panel meeting will occur via videoconference or teleconference.

The purpose of the meeting is not for individual peer reviewers to regress their scores to the panel mean. It is an opportunity to highlight divergent opinions or aspects of an application that a peer reviewer may have overlooked and adjust their scores as necessary. Peer reviewers should be able to justify how their scores align with the category descriptors.

NHMRC secretariat staff will coordinate the timing of their panel's meeting, as required and provide an estimate of the duration of the meeting.

The process for the videoconference/teleconference is as follows:

- The Chair will announce the application to be discussed, identifying any existing CoIs and asking peer reviewers to declare any new CoIs on which the panel will rule.
- The peer reviewer who nominated the application will be invited to explain why that application was nominated, making clear the matters they would like to raise with the panel for discussion. If an application is nominated by NHMRC, the Chair will direct members to discuss the application as necessary.
- Following the discussion of a nominated application, panel members will be given the opportunity to alter their score for each assessment criteria in RGMS. Panel members can choose not to change their score during the rescoring process.

It is important that the panel considers the merits of each application up for discussion in relation to the assessment criteria, rather than whether the application is considered fundable.

#### **3.3.4.7 Threshold scores and shortlisting**

To ensure focus on the objective of the Program 'to support outstanding multidisciplinary teams of investigators to work together to answer major questions that cannot be answered by a single investigator', applications will be subject to a threshold score of a Category 4 for 'Knowledge Gain' and 'Synergy'. Applications that fall below a Category 4 score in either criterion will not be shortlisted for further consideration.

Following the panel meeting, a single ranked list of applications across all panels will be produced. The most competitive applications that also meet the threshold scores for Knowledge Gain and Synergy will proceed to Stage Two of peer review. All other applications will be deemed non-competitive. CIAs of applications that are deemed non-competitive may be notified at this stage of the peer review process.

### **3.3.5 Peer Review - Stage Two**

Stage Two of Synergy Grants peer review is the assessment and scoring of the third of the three assessment criteria: Track Record (40%). At this stage, peer reviewers will only be required to review individual CI Track Record information. They will not have access to the Knowledge Gain and Synergy snapshot.

#### **3.3.5.1 Establishment of panel and assignment of applications**

Each CI Track Record will be assessed by up to five peer reviewers. Track Records will be assigned based on previously declared individual CoIs and suitability (peer reviewers are not required to declare CoIs and suitability a second time). It may be the case that a peer reviewer has a CoI with the application on which the CI is a team member, and not with the individual CI. In this case the peer reviewer may assess that CI Track Record.

Additional peer reviewers may be required to ensure appropriate expertise for all CI Track Record assessments. These peer reviewers will be required to declare any CoIs and suitability with applicants whose CI Track Record assessment they are assigned.

#### **3.3.5.2 Individual CI Track Record assessments**

Peer reviewers will be provided with a *Track Record PDF* for each CI assigned to them. Track Record assessment only includes CIs, not AIs. When accessing this document, peer reviewers should declare

any new CoIs with the CI not previously evident. Peer reviewers who become aware of any previously undeclared CoI should contact the NHMRC secretariat immediately. Peer reviewers will be required to delete or destroy any files in their possession pertaining to an applicant, and their application, where they become aware of a late high CoI.

Peer reviewers will provide scores against the Track Record criteria for CIs allocated to them in RGMS against the *Synergy Grants 2019 Assessment Criteria* ([Attachment E](#)) using the category descriptors (see Tables 1-6 of [Attachment F](#)).

To ensure impartiality and independence of assessments peer reviewers must not discuss the track records with other peer reviewers.

A list of CI track record scores from all peer reviewers will be provided to peer reviewers for the CIs allocated to them.

For all applications in Stage Two, the following should be considered during the review and subsequent scoring, where applicable.

#### **3.3.5.2.1 Relative to opportunity and career disruption**

Panel members must take into account productivity relative to opportunity and, where applicable, career disruption considerations in the assessment of all applications. To assist peer reviewers with their assessment, further details regarding relative to opportunity and career disruptions are provided at [Attachment J](#).

#### **3.3.5.2.2 Industry-relevant experience**

Peer reviewers should appropriately recognise an applicant's industry-relevant experience and outputs. To assist peer reviewers with their assessment, a *Guide to Evaluating Industry-Relevant Experience* is available on the [NHMRC website](#).

#### **3.3.5.2.3 Use of Impact Factors and other metrics**

Peer reviewers should take into account their expert knowledge of their field of research, as well as the citation and publication practices of that field, when assessing the publication component of an applicant's track record. Track record assessment should take into account the overall **impact**, quality and contribution to the field of all of the published journal articles from the grant applicant, not just the standing of the journal in which those articles are published.

It is not appropriate to use publication metrics such as Journal Impact Factors or the Excellence in Research for Australia (ERA) Ranked Journal List when assessing applications.

The San Francisco Declaration on Research Assessment (DoRA) makes recommendations for improving the evaluation of research assessment. NHMRC is a signatory to DoRA and adheres to the recommendations, as outlined in [DoRA](#), for its peer review processes.

#### **3.3.5.3 Nominating applications for discussion at panel meeting (Track Record)**

Peer reviewers will each be given the opportunity to nominate the Track Record scores of up to two CIs from those they assessed, for discussion. Peer reviewers must outline their reason for nominating a Track Record for discussion and what issues they would like to discuss with the panel. Peer reviewers will be required to submit their nominations to NHMRC by the nominated date. NHMRC will then circulate a list of CI Track Records nominated for discussion to peer reviewers in advance of the panel meeting. The nominated Track Records will be the only ones discussed by the panel.

If the panel does not nominate any applications for discussion the panel meeting will not be required. NHMRC will confirm in writing that no panel meeting is required.

NHMRC may at its discretion identify track records for discussion at meetings.

#### **3.3.5.4 Stage Two panel meeting**

It is expected that the panel meeting will occur via videoconference/teleconference.

The purpose of the discussions at this meeting is not for individual peer reviewers to regress their scores to the panel mean. It is an opportunity to highlight divergent opinions or aspects of a track record that a peer reviewer may have overlooked and adjust their scores as necessary. Peer reviewers should be able to justify how their scores align with the category descriptors for Track Record.

It is important that the panel considers the merits of each CI Track Record up for discussion in relation to the assessment criteria. Track Record assessment only includes CIs, not AIs.

NHMRC secretariat staff will coordinate with panels the timing of the panel meeting, as required, and provide an estimate of the duration of the meeting.

The process for the videoconference/teleconference is as follows:

- The Chair will announce the CI Track Record to be discussed, identifying any existing CoIs and asking peer reviewers to declare any new CoIs on which the panel will rule.
- The peer reviewer who nominated the CI Track Record will be invited to explain why that Track Record was nominated, making clear the matters they would like to raise with the panel for discussion. If a CI Track Record is nominated by NHMRC, the Chair will direct members to discuss the Track Record as necessary.
- Following the discussion of a nominated CI Track Record, panel members will be given the opportunity to alter their score for each assessment criteria in RGMS. Panel members can choose not to change their score during the rescoring process.

It is important that the panel considers the merits of each CI Track Record up for discussion in relation to the assessment criteria, rather than whether the application is considered fundable.

Any CI Track Record scores that are rescored will be fed back into the provisional ranked list.

#### **3.3.5.5 Principles for setting conditions of funding for NHMRC grants**

Setting a condition of funding (CoF) on a grant through the peer review process is, and should be, a rare event. When this does occur, the panel will use the principles set out below to decide the CoF. These principles aim to achieve a consistent approach, minimise the number of conditions set and support conditions that are unambiguous and able to be assessed.

CoFs relate to the awarding of funding, the continuation of funding or the level of funding. They do not relate to conditions which affect either eligibility to apply or subsequent peer review.

The principles are:

- NHMRC seeks to minimise the administrative burden on researchers and Administering Institutions.
- CoFs must not relate to the competitiveness of an application (e.g. project requires more community engagement); these issues should be considered during peer review and be reflected in the scores for the application.
- Any CoFs must be clear and measurable, so that the condition can be readily assessed as having been met.

#### **3.3.5.6 Panel documentation**

Peer reviewers must retain their speaking notes and any other notes they make of the peer review process until after the panel's deliberations are finalised. For panel meetings, this is when the final scores have been determined. After this time, notes, both hard copy and electronic, should be disposed of appropriately.

#### **3.3.5.7 Funding recommendation**

Once all panel meetings are complete, application scores from all panels (Stage One and Two) are used to create a ranked list.

This list will be used to prepare funding recommendations for NHMRC's Research Committee, Council and CEO, who will then make recommendations to the Minister for Health.

#### **3.3.5.8 Notification of outcomes**

Feedback will be provided to all applicants in the form of an Application Assessment Summary. It will contain numerical information on the competitiveness of the application that will be drawn from the scores given by peer reviewers.

## 4. Attachments

Attachment A – Understanding the Principles of Peer Review

Attachment B – Guidance for Declaring and Assessing Conflict of Interest

Attachment C – Concerns Arising During Peer Review about Possible Research Misconduct

Attachment D – Indigenous Research Excellence Criteria

Attachment E – Synergy Grants 2019 Assessment Criteria

Attachment F – Synergy Grants 2019 Category Descriptors

Attachment G – Guidance for Assessing Applications against the Indigenous Research Excellence Criteria

Attachment H – Guidance for Assessing Applications against the Synergy Grants Assessment Criteria

Attachment I – Concept of 'Synergy'

Attachment J – NHMRC Relative to Opportunity and Career Disruption Policy

# Attachment A – Understanding the Principles of Peer Review

## Fairness

- Peer review processes are designed to ensure that peer review is fair and seen to be fair by all involved.
- Peer reviewers have an obligation to ensure that each application is judged consistently and objectively on its own merits, against published assessment criteria. Peer reviewers must not introduce irrelevant issues into the assessment of an application.
- Applications will be subject to scrutiny and evaluation by individuals who have appropriate knowledge of the fields covered in the application.
- Peer reviewers should ensure that their assessments are accurate and honest and that all statements are capable of being verified.

Complaints processes are outlined on the [NHMRC website](#). All complaints to NHMRC relating to the peer review process are dealt with independently and impartially.

## Transparency

- NHMRC will publish key dates, all relevant material for applicants and peer reviewers, and grant announcements on its website or via [GrantConnect](#).
- NHMRC publicly recognises the contribution of participants in the peer review process, through publishing their names on the NHMRC website.<sup>3</sup>

## Independence

- The order of merit determined by peer review panels is not altered by NHMRC. However, additional applications may be funded 'below the funding line' in priority or strategic areas.
- Panel Chairs are independent and are not involved in the peer review of any application before that panel. Chairs act to ensure that NHMRC's processes are followed for each scheme, including adherence to the principles of this Guide.

## Appropriateness and balance

- Peer reviewers are selected to meet the program's objectives and to ensure adequate expertise to assess the applications received.
- NHMRC endeavours to ensure that panels are constituted to ensure an appropriate representation of gender, geography and large and small institutions.

## Confidentiality

- Peer reviewers are bound to act in accordance with the provisions of the Privacy Act 1988 and the confidentiality requirements under section 80 of the NHMRC Act. They must act in confidence and must not disclose any matter regarding applications under review to people who are not part of the process.
- Any information or documents made available to peer reviewers are confidential and must not be used other than to fulfil their role.
- NHMRC is subject to the *Freedom of Information Act 1982* which provides a statutory right for an individual to seek access to documents. If documents that deal with peer review fall within the scope of a request, there is a process for consultation and there are exemptions from release. NHMRC will endeavour to protect the identity of peer reviewers assigned to a particular application.

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<sup>3</sup> Such information will be in a form that prevents applicants determining which particular experts were involved in the review of their application.

## **Impartiality**

- Peer reviewers must declare all interests and matters that may, or may be perceived to, affect their judgement on particular applications.
- Panel members must disclose relationships with other members of the panel, or with grants being reviewed by other panel members, including:
  - research collaborators
  - student, teacher or mentoring relationships
  - employment arrangements
  - any other relationship that may, or may be seen to, impair fair and impartial judgement.
- Conflicts of interest are managed to ensure that no one with a high conflict is involved in decision making on relevant applications.

## **Quality and Excellence**

- NHMRC will continue to introduce evidence-based improvements into its peer review processes.
- Any significant change will be developed in consultation with the research community and may involve piloting new processes in.
- NHMRC will strive to introduce new technologies that are demonstrated to maximise the benefits of peer review, and improve the efficiency and effectiveness of the process while minimising individual workloads.
- NHMRC will undertake post-program assessment of all its schemes with feedback from the sector.
- NHMRC will provide advice, training and feedback for peer reviewers new to NHMRC peer review.
- Where NHMRC finds peer reviewers to be substandard in their performance, NHMRC may provide such feedback directly to the reviewer or their institution.

## Attachment B – Guidance for Declaring and Assessing Conflict of Interest

The following Col Situations and Additional Guidance for Work and Professional Col tables outline matters that may need to be considered when deciding the level of potential conflicts and provide some examples of specific situations where Cols in the peer review process apply.

The tables are intended to be for guidance only. They are representative of Col situations rather than definitive, as each situation is different and needs to be considered on its merits. The tables are provided to assist participants in the peer review process to identify the types of circumstances in which Cols might arise, but are not intended to be checklists.

Note that Cols relate to Chief Investigators (CIs) – **not** Associate Investigators (AIs).

### Col situations requiring further clarification

Situation	Explanations and examples	Conflict level*
Application under review	You are a named participant on the application under review.	High
	You have had discussions/input into the study design or research proposal of this application.	High
Collaborations	You have actively collaborated re publications (co-authorship), pending applications, existing NHMRC or other grants.	High
	You have an indirect collaboration e.g. collaborating co-worker, member of a research or discussion group, co-author of a large multi-author paper where involvement was minimal, provided cells/animals etc. to applicants without financial gain or exchange.	Obtain a ruling from NHMRC
	You are planning, or have been approached to be involved in a future grant application or other future collaborative relationship with this applicant(s).	Obtain a ruling from NHMRC
Working relationship	Please refer to Additional Guidance table below.	
Professional relationships and interests	Please refer to Additional Guidance table below.	
Social relationship and/or interests	There is a personal/social relationship between you, your partner or other member of your family and the applicant.	Usually High, may need a ruling from NHMRC
	You have a personal/social relationship with the applicant's partner or other member of their family.	Usually High, may need a ruling from NHMRC
Teaching or supervisory relationship	For either undergraduate or postgraduate studies, you have taught or supervised the	High

	applicant; you co-supervised the applicant; your own research was supervised by the applicant.	
Financial interest in the application	You have an associated patent pending; supply goods and services; improved access to facilities; provide cells/animals or similar to the applicant.	Usually High, may need a ruling from NHMRC
	You receive research funding or other support from a company and the research to be reviewed may impact upon the company.	Usually High, may need a ruling from NHMRC
Other interests or situations	You have a previous or pending dispute (may require consideration of events earlier than the last five years).	High

\*Indicative only. Experienced NHMRC staff will exercise judgement when deciding the level of conflict and, in doing so, will consider the particular circumstance of each potential conflict.

### Additional Guidance for Work and Professional Col

Situation	Explanations and examples		Conflict level
Working Relationship	You have the same employer or are part of the same organisation	Where a peer reviewer and an applicant work at the same independent Medical Research Institute (e.g. Baker IDI Heart and Diabetes Institute, The Garvan Institute of Medical Research etc.) or in the same University/Hospital Department.	High
		Where a peer reviewer or applicant holds a position of influence within an organisation, or has a pecuniary interest, e.g. Dean of Faculty or School/Institute Directors.	High
		Where a peer reviewer and an applicant work for the same institution but at different campuses and do not know each other.	Low
		Where a peer reviewer and an applicant work in the same faculty but in different schools/departments and do not know each other.	Low
	You are working in the same department (or equivalent) within an organisation		High - in most situations due to perceived Col relating to potential financial benefit from showing favour towards application, and the likelihood that the assessor and applicant know

			each other.
	You work in the same locality but for a different organisation, i.e. Where an peer reviewer works for a University and an applicant works for an affiliated Medical Research Institute (or vice versa), such as relationships between:	When there is a direct association/collaboration between the peer reviewer and applicant, where the assessor may have or may be perceived to have a vested interest in this research.	High
	<ul style="list-style-type: none"> <li>The University of Melbourne and Walter and Eliza Hall Institute of Medical Research (WEHI); or</li> <li>The University of New South Wales and The George Institute for Global Health.</li> </ul>	Where two organisations are affiliated but there is no direct association/collaboration between the peer reviewer and applicant (e.g. researchers located at the University of Melbourne faculty that has no direct association/collaboration with applicant at WEHI).	Low
Professional relationships and interests	You are also a member of the same scientific advisory committee, review board, exam board, trial committee etc.	Where you hold a membership in which you may be perceived to have a vested interest, i.e. pecuniary or other direct interests with the proposed research, e.g. when another board/committee member is associated with the grant application (a member of the CI team or is Faculty/Department Head where the research is to be conducted).	High
		You are a member of the same advisory board or committee but otherwise have no links or association that would constitute a High ruling.	Low
	You or your organisation are affiliated with the applicant's organisation, i.e. where a peer reviewer and an applicant work for different organisations that have active/ongoing collaborations or affiliations, such as affiliations between:	Where there is a direct link/collaboration between the applicant and peer reviewer, in which the peer reviewer may have or may be perceived to have a vested interest in this research.	High
		Where two organisations are affiliated but there is no direct association/collaboration between applicant and peer reviewer (e.g. researcher located at the University of Melbourne and has no direct link/collaboration with individual at WEHI).	Low
	<ul style="list-style-type: none"> <li>The University of Melbourne and Walter and Eliza Hall Institute of Medical Research (WEHI), or</li> <li>The University of New South Wales and The George Institute for Global Health, or</li> <li>The Schools of Health Sciences at two or more different universities, as part</li> </ul>		

	of a research or teaching collaboration.		
	You or your organisation is affiliated or associated with organisations such as pharmaceutical companies, tobacco companies etc.	When you or your institution has an affiliation/association with the organisation(s) that may have or may be perceived to have vested interest in this research e.g. a pharmaceutical company that has provided drugs to the applicants for testing.	High
		When you or your institution has an indirect affiliation/ association with the organisation(s) that may have or may be perceived to have a vested interest in this research, e.g. you are employed at a large institution in an area distant from the organisation(s) in question.	Low

\*Indicative only. Experienced NHMRC staff will exercise judgement when deciding the level of conflict and, in doing so, will consider the particular circumstance of each potential conflict.

## Attachment C – Concerns Arising During Peer Review about Possible Research Misconduct

This advice is for researchers or others who have become concerned during NHMRC peer review assessment that research misconduct may have occurred. It helps peer reviewers understand the process for raising these concerns.

The [Australian Code for the Responsible Conduct of Research](#) (the Code) aims to promote high quality conduct in research and sets out responsibilities for institutions and staff when research misconduct occurs. You should already be familiar with Part A of the Code, which describes the principles and practices for encouraging responsible conduct for researchers and institutions.

### Your role in peer review

Peer review is central to NHMRC's strategy of investing in high quality health and medical research, building research capacity and supporting the best research and researchers.

The Code describes peer review as the impartial and independent assessment of research by others in the same or a related field. The Code also notes that peer review may play a role in drawing attention to deviations from the principles of the Code. Section 6.2 of the Code identifies the responsibilities of peer reviewers.

### What should I do if I come across something that suggests research misconduct while reviewing a grant for NHMRC?

When you are undertaking peer review for NHMRC, you might have concerns, for example, about items in a publications list, or potentially false or misleading statements, diagrams or figures. You could also have concerns about the behaviour of other peer reviewers.

### Re-familiarise yourself with the Code

The first step should be to re-read the Code to make sure that you are clear about what you believe is wrong. Definitions of research misconduct can be found on page 10.1.

Part A of the Code provides advice on how to manage research data and materials, how to publish and disseminate research findings (including proper attribution of authorship), how to collaborate across institutions, how to manage conflicts of interest as well as obligations in peer review.

The second step should be to read NHMRC's Grant Guidelines that address issues about incomplete, false or misleading applications.

### How should I report my concerns if I believe research misconduct may have occurred?

If you believe research misconduct may have occurred you should raise your concerns with NHMRC. The process depends on the peer review stage the application is at when your concerns arise:

- During Stage One or Two assessment but prior to the commencement of panel meetings, you should contact the relevant secretariat using the funding program or panel-specific email address.
- If Peer Review Panel meetings are underway, you should raise the issue in a side discussion with the panel Chair, secretariat and/or the director of the relevant funding program.

Where appropriate, the relevant NHMRC director will then refer the matter to NHMRC's Ethics and Integrity section, which will consider the concerns and, where appropriate, contact the research institution involved. It is important to note that NHMRC does not conduct its own investigation into allegations. As per the Code, this is the responsibility of the relevant institution. However, NHMRC will liaise with the institution regarding the outcome of any investigation and take any necessary precautionary or consequential actions under the [NHMRC Policy on Misconduct Related to NHMRC Funding](#).

It is important that you document your concerns clearly and precisely to assist NHMRC in providing specific information to the relevant research institution.

### **Should I raise these issues in my assessment report or in panel discussion?**

As an assessor, your assessment report or contribution to panel discussions should not refer to any concerns related to research integrity. Assessment comments can and should comment on or seek clarification on all aspects of the application without implying concerns with the integrity of the application or applicant. These concerns should be raised through a separate process while the application continues to progress through the peer review process. For example, as an assessor it would be appropriate to query statistics in an application that appear to be incorrect. This gives the applicant an opportunity to clarify or correct the matter in schemes that allow for rebuttal. However, it is not appropriate in assessment reports to suggest that an apparent error or inconsistency is indicative of research misconduct.

The [NHMRC Policy on Misconduct Related to NHMRC Funding](#) ensures that mechanisms are in place to consider any unresolved research misconduct allegations prior to the release of funding. For example, a condition could be placed on a grant preventing the commencement of funding until after the resolution of the matter, with funding potentially being withheld if research misconduct is proven.

Since allegations are investigated by institutions, NHMRC may need to provide written material on the nature of the concerns. We will not reveal your identity to the institution without your consent and will strive to maintain the anonymity of peer reviewers.

### **What if I am still not satisfied?**

If you do not believe your concerns have been adequately dealt with through this process, you can raise your concerns with the Ethics and Integrity Team by emailing [integrity@nhmrc.gov.au](mailto:integrity@nhmrc.gov.au) who can provide you with further advice.

## Attachment D – Indigenous Research Excellence Criteria

To qualify as Aboriginal and Torres Strait Islander health research, at least 20% of the research effort and/or capacity building must relate to Aboriginal and Torres Strait Islander health.

Qualifying applications must address the NHMRC Indigenous Research Excellence Criteria as follows:

- **Community engagement:** the proposal demonstrates how the research and potential outcomes are a priority for Aboriginal and Torres Strait Islander communities with relevant community engagement by individuals, communities and/or organisations in conceptualisation, development and approval, data collection and management, analysis, report writing and dissemination of results.
- **Benefit:** the potential health benefit of the project is demonstrated by addressing an important public health issue for Aboriginal and Torres Strait Islander people. This benefit can have a single focus or affect several areas, such as knowledge, finance and policy or quality of life. The benefit may be direct and immediate, or it can be indirect, gradual and considered.
- **Sustainability and transferability:** the proposal demonstrates how the results of the project have the potential to lead to achievable and effective contributions to health gain for Aboriginal and Torres Strait Islander people, beyond the life of the project. This may be through sustainability in the project setting and/or transferability to other settings such as evidence based practice and/or policy. In considering this issue, the proposal should address the relationship between costs and benefits.
- **Building capability:** the proposal demonstrates how Aboriginal and Torres Strait Islander people, communities and researchers will develop relevant capabilities through partnerships and participation in the project.

Panels will consider these in their overall assessment of the application, together with the scheme-specific assessment criteria.

## Attachment E – Synergy Grants 2019 Assessment Criteria

Applications for Synergy Grants 2019 are assessed by peers on the extent to which the application meets the program objectives. Applications will be assessed against the assessment criteria listed below.

- Track Record, relative to opportunity (40%)
- Knowledge Gain (30%)
- Synergy (30%).

Track Record - NHMRC defines 'Track Record' for the Synergy Grant scheme as the value of an individual's past research achievement, relative to opportunity, not prospective achievements, using evidence-based components. Assessment of Track Record comprises peer reviewers' consideration of:

- Publications (20%)
- Research Impact (15%)
- Leadership (5%).

Knowledge Gain - NHMRC defines 'Knowledge Gain' for the Synergy Grant scheme as the quality of the proposed research and significance of the knowledge gained. It incorporates theoretical concepts, hypothesis, research design, robustness and the extent to which the research findings will contribute to the research area and health outcomes (by advancing knowledge, practice or policy).

Synergy - NHMRC defines 'Synergy' for the Synergy Grant scheme as the quality of a diverse team's multidisciplinary and collaborative approach to solve a major health and medical research question, while building workforce capacity.

Further guidance on how to assess Synergy Grant applications against the assessment criteria is at [Attachment H](#).

Applications are assessed relative to opportunity, taking into consideration any career disruptions ([Attachment J](#)), where applicable.

## **Attachment F – Synergy Grants 2019 Category Descriptors**

The following category descriptors are used as a guide to scoring an application against each of the assessment criteria.

While the category descriptors provide peer reviewers with some benchmarks for appropriately scoring each application, **it is not essential that all descriptors relating to a given score are met.**

The category descriptors are a guide to a “best fit” outcome. Peer reviewers will consistently refer to these category descriptors to ensure thorough, equitable and transparent assessment of applications.

### **Assessing Aboriginal and Torres Strait Islander Contributions**

It is recognised that Aboriginal and Torres Strait Islander applicants make additional valuable contributions to policy development, clinical/public health leadership and/or service delivery, community activities and linkages, and are often representatives on key committees. If applicable, these contributions should be considered when assessing research output and track record.

## Track Record, relative to opportunity (40%)

### Publications (20%)

Table 1. Publications

Score	Performance Indicator	Category Descriptors
7	<b>Exceptional</b>	Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates: <ul style="list-style-type: none"> <li>an <b>exceptional</b> record of publications in terms of quality and contribution to science</li> </ul>
6	<b>Outstanding</b>	Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates: <ul style="list-style-type: none"> <li>an <b>outstanding</b> record of publications in terms of quality and contribution to science</li> </ul>
5	<b>Excellent</b>	Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates: <ul style="list-style-type: none"> <li>an <b>excellent</b> record of publications in terms of quality and contribution to science</li> </ul>
4	<b>Very Good</b>	Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates: <ul style="list-style-type: none"> <li>a <b>very good</b> record of publications in terms of quality and contribution to science</li> </ul>
3	<b>Good</b>	Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates: <ul style="list-style-type: none"> <li>a <b>good</b> record of publications in terms of quality and contribution to science</li> </ul>
2	<b>Satisfactory</b>	Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates: <ul style="list-style-type: none"> <li>a <b>satisfactory</b> record of publications in terms of quality and contribution to science</li> </ul>
1	<b>Weak or limited</b>	Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates: <ul style="list-style-type: none"> <li>a <b>weak or limited</b> record of publications in terms of quality and contribution to science</li> </ul>

Research Impact (15%)

Table 2. Reach and significance of the research impact

Less than 10 years post-PhD (taking into account career disruptions)	Category Descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	Note: Applicants do not need to demonstrate all types of research impact	There is robust, verifiable evidence of:	
7	an <b>exceptional</b> knowledge, health, economic and/or social impact	<p>Knowledge:</p> <ul style="list-style-type: none"> <li>a paradigm changing development that has led to (a) new knowledge within the field that is recognised across multiple countries, (b) significant influence beyond the specific field of research or (c) the development of a new field(s) of research that has been recognised across multiple countries/beneficiaries</li> </ul>	an <b>exceptional</b> knowledge, health, economic and/or social impact	7
		<p>Health</p> <ul style="list-style-type: none"> <li>a paradigm changing development that has improved health or health systems, services, policy, programs or clinical practice that (a) had a significant impact on health with an extensive reach, (b) had a profound impact on health with a modest reach, (c) profoundly improved the health of Australia's Indigenous people or (d) led to a significant, scalable and sustainable change in health systems and services in a large number of communities</li> </ul> <p>Economic</p> <ul style="list-style-type: none"> <li>development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of significant commercial income or (b) a profound reduction in healthcare costs</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li>changes in policy that have had (a) a significant impact on the social well-being, equality or social inclusion of very large numbers of people at a national level or across multiple countries or (b) a profound impact on the social well-being of the end-user, public and community of a smaller number of individuals at a national level or across multiple countries</li> </ul>	an <b>outstanding</b> knowledge, health, economic and/or social impact	6

Less than 10 years post-PhD (taking into account career disruptions)	Category Descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	Note: Applicants do not need to demonstrate all types of research impact	There is robust, verifiable evidence of:	
7	an <b>exceptional</b> knowledge, health, economic and/or social impact	<p>Knowledge:</p> <ul style="list-style-type: none"> <li>a major development that has led to (a) new knowledge within the field that is recognised nationally or across multiple countries, (b) a major influence beyond the specific field of research or (c) a major influence on the development of a new field(s) of research that has been recognised nationally or across multiple countries/beneficiaries</li> </ul> <p>Health</p> <ul style="list-style-type: none"> <li>an important development that has improved health or health systems, services, policy, programs or clinical practice that (a) had a major impact on health with an extensive reach, (b) had a significant impact on health with a modest reach, (c) led to a significant improvement in the health of Australia's Indigenous people or (d) led to major scalable and sustainable change in health systems and services in a number of communities</li> </ul>	an <b>excellent</b> knowledge, health, economic and/or social impact	5
6	an <b>outstanding</b> knowledge, health, economic and/or social impact	<p>Economic</p> <ul style="list-style-type: none"> <li>development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of considerable commercial income or (b) a major reduction in healthcare costs</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li>changes in policy that have either had (a) a major impact on the social well-being, equality or social inclusion of very large numbers of people at a local, state/territory or national level or (b) a significant impact on the social well-being of the end-user, public and community of a smaller number of individuals at a local, state/territory or national level</li> </ul>	a <b>very good</b> knowledge, health, economic and/or social impact	4
5	an <b>excellent</b> knowledge, health, economic and/or social impact	<p>Knowledge:</p> <ul style="list-style-type: none"> <li>a change that has led to (a) new knowledge within the field that is recognised nationally or across multiple countries, (b) had some influence beyond the specific field of research, or (c) some influence on the development of a new field(s) of research that has been recognised nationally or across multiple countries/beneficiaries</li> </ul>	a <b>good</b> knowledge, health, economic and/or social impact	3

Less than 10 years post-PhD (taking into account career disruptions)	Category Descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	Note: Applicants do not need to demonstrate all types of research impact	There is robust, verifiable evidence of:	
4	a <b>very good</b> knowledge, health, economic and/or social impact	Health <ul style="list-style-type: none"> <li>a development that has improved health or health systems, services, policy, programs or clinical practice that (a) had some impact on health with an extensive reach, (b) had a major impact on health with a modest reach, (c) led to a major improvement in the health of Australia's Indigenous people, or (d) led to some scalable and sustainable change in health systems and services in a small number of communities</li> </ul>		
3	a <b>good</b> knowledge, health, economic and/or social impact	Economic <ul style="list-style-type: none"> <li>development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of some commercial income or (b) some reduction in healthcare costs</li> </ul> Social <ul style="list-style-type: none"> <li>changes in policy that have had (a) some impact on the social well-being, equality or social inclusion of very large numbers of people at a local, state/territory or national level or (b) an impact on the social well-being of the end-user, public and community of a smaller number of individuals at a local, state/territory or national level</li> </ul>	a <b>satisfactory</b> knowledge, health, economic and/or social impact	2
2	a <b>satisfactory</b> knowledge, health, economic and/or social impact			
1	a <b>weak or limited</b> knowledge, health, economic and/or social impact	There is limited or weak evidence of: <ul style="list-style-type: none"> <li>the development of new knowledge</li> <li>improved health systems and services</li> <li>reductions in health care costs or economic growth</li> <li>improvements in social well-being, equality or social inclusion.</li> </ul>	a <b>weak or limited</b> knowledge, health, economic and/or social impact	1

**Table 3. Research Program’s contribution to the Research Impact**

Score	Performance Indicator	Category Descriptors
7	<b>Exceptional</b>	Relative to opportunity and to their field of research, there is robust verifiable evidence that the applicant’s research program made: <ul style="list-style-type: none"> <li>• an <b>exceptional</b> contribution to the knowledge, health, economic and/or social impact</li> </ul>
6	<b>Outstanding</b>	Relative to opportunity and to their field of research, there is robust verifiable evidence that the applicant’s research program made: <ul style="list-style-type: none"> <li>• an <b>outstanding</b> contribution to the knowledge, health, economic and/or social impact</li> </ul>
5	<b>Excellent</b>	Relative to opportunity and to their field of research, there is robust verifiable evidence that the applicant’s research program made: <ul style="list-style-type: none"> <li>• an <b>excellent</b> contribution to the knowledge, health, economic and/or social impact</li> </ul>
4	<b>Very good</b>	Relative to opportunity and to their field of research, there is robust verifiable evidence that the applicant’s research program made: <ul style="list-style-type: none"> <li>• a <b>very good</b> contribution to the knowledge, health, economic and/or social impact</li> </ul>
3	<b>Good</b>	Relative to opportunity and to their field of research, there is robust verifiable evidence that the applicant’s research program made: <ul style="list-style-type: none"> <li>• a <b>good</b> contribution to the knowledge, health, economic and/or social impact</li> </ul>
2	<b>Satisfactory</b>	Relative to opportunity and to their field of research, there is robust verifiable evidence that the applicant’s research program made: <ul style="list-style-type: none"> <li>• a <b>satisfactory</b> contribution to the knowledge, health, economic and/or social impact</li> </ul>
1	<b>Weak, Limited or No</b>	Relative to opportunity and to their field of research, there is robust verifiable evidence that the applicant’s research program made: <ul style="list-style-type: none"> <li>• a <b>weak, limited or no</b> contribution to the knowledge, health, economic and/or social impact</li> </ul>

**Table 4. Research Program’s contribution to the Research Impact**

Score	Performance Indicator	Category Descriptors	
7	<b>Exceptional</b>	Relative to opportunity and to their field, there is robust verifiable evidence that the applicant made: <ul style="list-style-type: none"> <li>an <b>exceptional</b> contribution to the research program that led to a knowledge, health, economic and/or social impact</li> </ul>	Leadership <b>AND/OR</b> instrumental role in a research program
6	<b>Outstanding</b>	Relative to opportunity and to their field, there is robust verifiable evidence that the applicant made: <ul style="list-style-type: none"> <li>an <b>outstanding</b> contribution to the research program that led to a knowledge, health, economic and/or social impact</li> </ul>	
5	<b>Excellent</b>	Relative to opportunity and to their field, there is robust verifiable evidence that the applicant made: <ul style="list-style-type: none"> <li>an <b>excellent</b> contribution to the research program that led to a knowledge, health, economic and/or social impact</li> </ul>	Leadership of a <b>component AND/OR collaborative role</b> (e.g. co-investigator) in a research program
4	<b>Very Good</b>	Relative to opportunity and to their field, there is robust verifiable evidence that the applicant made: <ul style="list-style-type: none"> <li>a <b>very good</b> contribution to the research program that led to a knowledge, health, economic and/or social impact</li> </ul>	
3	<b>Good</b>	Relative to opportunity and to their field, there is robust verifiable evidence that the applicant made: <ul style="list-style-type: none"> <li>a <b>good</b> contribution to the research program that led to a knowledge, health, economic and/or social impact</li> </ul>	Contribution to a research program
2	<b>Satisfactory</b>	Relative to opportunity and to their field, there is robust verifiable evidence that the applicant made: <ul style="list-style-type: none"> <li>a <b>satisfactory</b> contribution to the research program that led to a knowledge, health, economic and/or social impact</li> </ul>	
1	<b>Weak, Limited or No</b>	Relative to opportunity and to their field, there is robust verifiable evidence that the applicant made: <ul style="list-style-type: none"> <li>a <b>weak, limited or no</b> contribution to the research program that led to a knowledge, health, economic and/or social impact</li> </ul>	Limited or no contribution to a research program

## Leadership (5%)

**Table 5. Leadership**

Score	Performance Indicator	Category Descriptors
7	<b>Exceptional</b>	<p>Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates <b>exceptional</b> performance in:</p> <ul style="list-style-type: none"> <li>• supervision, mentoring, training and/or career development of staff and/or students within and/or beyond their research group</li> <li>• experience and contribution to the peer review of publications and grant applications, nationally and/or internationally</li> <li>• contribution to community engagement, public advocacy, government advisory boards or committees, professional societies at a local, national and/or international level</li> <li>• non-research contribution(s) to department, centre, institute or organisation e.g. leadership or membership of committee</li> <li>• conception and direction of a research project or program</li> <li>• building and maintaining collaborative networks necessary to achieve research outcomes within and/or beyond institution.</li> </ul>
6	<b>Outstanding</b>	<p>Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates <b>outstanding</b> performance in:</p> <ul style="list-style-type: none"> <li>• supervision, mentoring, training and/or career development of staff and/or students within and/or beyond their research group</li> <li>• experience and contribution to the peer review of publications and grant applications, nationally and/or internationally</li> <li>• contribution to community engagement, public advocacy, government advisory boards or committees, professional societies at a local, national and/or international level</li> <li>• non-research contribution(s) to department, centre, institute or organisation e.g. leadership or membership of committee</li> <li>• conception and direction of a research project or program</li> <li>• building and maintaining collaborative networks necessary to achieve research outcomes within and/or beyond their institution.</li> </ul>
5	<b>Excellent</b>	<p>Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates <b>excellent</b> performance in:</p> <ul style="list-style-type: none"> <li>• supervision, mentoring, training and/or career development of staff and/or students within and/or beyond their research group</li> <li>• experience and contribution to the peer review of publications and grant applications, nationally and/or internationally</li> <li>• contribution to community engagement, public advocacy, government advisory boards or committees, professional societies at a local, national and/or international level</li> <li>• non-research contribution(s) to department, centre, institute or organisation e.g. leadership or membership of committee</li> <li>• conception and direction of a research project or program</li> <li>• building and maintaining collaborative networks necessary to achieve research outcomes within and/or beyond their institution.</li> </ul>

Score	Performance Indicator	Category Descriptors
4	<b>Very Good</b>	<p>Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates <b>very good</b> performance in:</p> <ul style="list-style-type: none"> <li>• supervision, mentoring, training and/or career development of staff and students within and/or beyond their research group</li> <li>• experience and contribution to the peer review of publications and grant applications, nationally and/or internationally</li> <li>• contribution to community engagement, public advocacy, government advisory boards or committees, professional societies at a local, national and/or international level</li> <li>• non-research contribution(s) to department, centre, institute or organisation e.g. leadership or membership of committee</li> <li>• conception and direction of a research project or program</li> <li>• building and maintaining collaborative networks necessary to achieve research outcomes within and/or beyond their institution.</li> </ul>
3	<b>Good</b>	<p>Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates <b>good</b> performance in:</p> <ul style="list-style-type: none"> <li>• supervision, mentoring, training and/or career development of staff and/or students within and/or beyond their research group</li> <li>• experience and contribution to the peer review of publications and grant applications, nationally and/or internationally</li> <li>• contribution to community engagement, public advocacy, government advisory boards or committees, professional societies at a local, national and/or international level</li> <li>• non-research contribution(s) to department, centre, institute or organisation e.g. leadership or membership of committee</li> <li>• conception and direction of a research project or program</li> <li>• building and maintaining collaborative networks necessary to achieve research outcomes within and/or beyond their institution.</li> </ul>
2	<b>Satisfactory</b>	<p>Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates <b>satisfactory</b> performance in:</p> <ul style="list-style-type: none"> <li>• supervision, mentoring, training and/or career development of staff and/or students within and/or beyond their research group</li> <li>• experience and contribution to the peer review of publications and grant applications, nationally and/or internationally</li> <li>• contribution to community engagement, public advocacy, government advisory boards or committees, professional societies at a local, national and/or international level</li> <li>• non-research contribution(s) to department, centre, institute or organisation e.g. leadership or membership of committee</li> <li>• conception and direction of a research project or program</li> <li>• building and maintaining collaborative networks necessary to achieve research outcomes within and/or beyond their institution.</li> </ul>
1	<b>Weak or limited</b>	<p>Relative to opportunity (including career stage) and to their field of research, the applicant demonstrates <b>weak or limited</b> performance in:</p> <ul style="list-style-type: none"> <li>• supervision, mentoring, training and/or career development of staff and/or students within and/or beyond their research group</li> <li>• experience and contribution to the peer review of publications and grant applications, nationally and/or internationally</li> <li>• contribution to community engagement, public advocacy, government advisory boards or committees, professional societies at a local, national and/or international level</li> <li>• non-research contribution(s) to department, centre, institute or organisation e.g. leadership or membership of committee</li> <li>• conception and direction of a research project or program</li> <li>• building and maintaining collaborative networks necessary to achieve research outcomes within and/or beyond their institution.</li> </ul>

## Knowledge Gain (30%) and Synergy (30%)

**Table 6. Category Descriptors for Knowledge Gain and Synergy**

Category	Knowledge gain	Synergy
7 Exceptional	<p>The proposed multidisciplinary research:</p> <ul style="list-style-type: none"> <li>• <b>Comprehensively integrates complementary</b> information, data, techniques, tools, perspectives, concepts and/or theories, from two or more disciplines or bodies of specialised knowledge, that are essential to solve a major research question that is beyond the scope of a single discipline or area of research practice:               <ul style="list-style-type: none"> <li>○ is supported by an <b>extremely well</b> justified and reasoned hypothesis/rationale</li> <li>○ the scientific framework, design, methods and analyses are <b>flawless, highly</b> developed, <b>completely</b> complementary and integrated and <b>highly</b> appropriate</li> <li>○ the integration of research components is <b>extremely likely</b> to result in novel conceptual approaches and insights.</li> </ul> </li> <li>• Demonstrates to an <b>extremely high level</b> that the research proposal tackles a <b>major</b> question addressing an issue of <b>critical importance</b> to advance the research or health area (not prevalence or magnitude of the issue)</li> <li>• Collectively has or has access to <b>exceptional</b> technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes</li> <li>• <b>Will</b> result in <b>extremely</b> significant and <b>transformative</b> changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues</li> <li>• <b>Will</b> lead to <b>extremely</b> significant research outputs (e.g. intellectual property, publications, policy advice, products,</li> </ul>	<p>The proposed research team provides <b>exceptional</b> synergy (diversity, multidisciplinary and collaborative gain) as it:</p> <p><u>Diversity</u></p> <ul style="list-style-type: none"> <li>• Comprises a diverse team (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise and build capacity aligned to the research question               <ul style="list-style-type: none"> <li>○ Provides investigators diverse experience and vital perspectives, without which the research question cannot be addressed.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Multidisciplinary</u></p> <ul style="list-style-type: none"> <li>• <b>Comprehensively</b> demonstrates why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily</li> <li>• Integrates researchers with <b>highly complementary expertise and insights</b> across disciplines <b>necessary and sufficient</b> to address the major research question and lead to <b>transformative outcomes</b> <ul style="list-style-type: none"> <li>○ Achieves integration of the various researchers' skills and perspectives that is <b>extremely likely</b> to produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Collaborative gain</u></p> <ul style="list-style-type: none"> <li>• Demonstrates to an <b>extremely high degree</b>, comprehensive and suitable plan(s) for the research team to work synergistically,</li> </ul>

Category	Knowledge gain	Synergy
	<p>services, teaching aids, consulting, contract research, spin-offs, licensing etc.)</p> <ul style="list-style-type: none"> <li>• <b>Would be extremely</b> competitive with the best, similar, research proposals internationally.</li> </ul>	<p>including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources</p> <ul style="list-style-type: none"> <li>• Demonstrates sustainable collaborations that are <b>highly</b> likely to extend beyond the life of the project</li> <li>• Incorporates <b>comprehensive and exceptional</b> strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).</li> </ul>
6 Outstanding	<p>The proposed multidisciplinary research:</p> <ul style="list-style-type: none"> <li>• <b>Integrates complementary</b> information, data, techniques, tools, perspectives, concepts and/or theories, from two or more disciplines or bodies of specialised knowledge, that are essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: <ul style="list-style-type: none"> <li>○ is supported by a <b>very well</b> justified and reasoned hypothesis/rationale</li> <li>○ the scientific framework, design, methods and analyses <b>are well</b> developed, complementary and integrated and <b>highly</b> appropriate <b>with only a few minor weaknesses</b></li> <li>○ the integration of research components is <b>highly likely</b> to result in novel conceptual approaches and insights.</li> </ul> </li> <li>• Demonstrates to a <b>very high level</b> that the research proposal tackles a major question addressing an issue that is <b>very important</b> to advance the research or health area (not prevalence or magnitude of the issue)</li> <li>• Collectively has or has access to <b>outstanding</b> technical resources, infrastructure, equipment and facilities, and if required, has</li> </ul>	<p>The proposed research team provides <b>outstanding</b> synergy (diversity, multidisciplinary and collaborative gain) as it:</p> <p><u>Diversity</u></p> <ul style="list-style-type: none"> <li>• Comprises a diverse team (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise and build capacity aligned to the research question <ul style="list-style-type: none"> <li>○ Provides investigators diverse experience and vital perspectives, without which the research question cannot be addressed.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Multidisciplinary</u></p> <ul style="list-style-type: none"> <li>• Demonstrates to <b>a very high degree</b> why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily</li> <li>• Integrates researchers with <b>complementary expertise and insights</b> across disciplines <b>necessary and sufficient</b> to address the major research question and lead to <b>substantial outcomes</b> <ul style="list-style-type: none"> <li>○ Achieves integration of the various researchers' skills and</li> </ul> </li> </ul>

Category	Knowledge gain	Synergy
	<p>access to additional expertise necessary to achieve project outcomes</p> <ul style="list-style-type: none"> <li>• Will result in <b>very highly</b> significant and <b>substantial</b> changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues</li> <li>• Will lead to <b>very highly</b> significant research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.)</li> <li>• Would be <b>highly</b> competitive with the best, similar, research proposals internationally.</li> </ul>	<p>perspectives that is <b>highly likely</b> to produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects.</p> <p><b>AND</b></p> <p><u>Collaborative gain</u></p> <ul style="list-style-type: none"> <li>• Demonstrates to a <b>very high degree</b>, comprehensive and suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources</li> <li>• Demonstrates sustainable collaborations that are <b>highly</b> likely to extend beyond the life of the project.</li> <li>• Incorporates <b>comprehensive</b> and <b>outstanding</b> strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).</li> </ul>
5 Excellent	<p>The proposed multidisciplinary research:</p> <ul style="list-style-type: none"> <li>• <b>Integrates complementary</b> information, data, techniques, tools, perspectives, concepts and/or theories, from two or more disciplines or bodies of specialised knowledge, that are essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: <ul style="list-style-type: none"> <li>○ is supported by a well justified and reasoned hypothesis/rationale</li> <li>○ the scientific framework, design, methods and analyses are well developed, complementary and integrated and highly appropriate with several minor weaknesses</li> <li>○ the integration of research components is likely to result in</li> </ul> </li> </ul>	<p>The proposed research team provides <b>excellent</b> synergy (diversity, multidisciplinary and collaborative gain) as it:</p> <p><u>Diversity</u></p> <ul style="list-style-type: none"> <li>• Comprises a diverse team (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise and build capacity aligned to the research question <ul style="list-style-type: none"> <li>○ Provides investigators diverse experience and vital perspectives, without which the research question cannot be addressed.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Multidisciplinary</u></p> <ul style="list-style-type: none"> <li>• Demonstrates to a <b>high degree</b> why the research requires the integration of knowledge from multiple disciplines and has processes</li> </ul>

Category	Knowledge gain	Synergy
	<p>novel conceptual approaches and insights.</p> <ul style="list-style-type: none"> <li>• Demonstrates to a <b>high level</b> that the research proposal tackles a <b>major</b> question addressing an issue that is of <b>considerable importance</b> to advance the research or health area (not prevalence or magnitude of the issue)</li> <li>• Collectively has or has access to <b>excellent</b> technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes</li> <li>• <b>Will</b> result in <b>highly significant</b> and <b>substantial</b> changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues</li> <li>• <b>Will</b> lead to <b>highly</b> significant research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.)</li> <li>• Would be <b>competitive</b> with the best, similar, research proposals internationally.</li> </ul>	<p>to ensure the research question is addressed using these different disciplines complementarily</p> <ul style="list-style-type: none"> <li>• Integrates researchers with <b>complementary expertise and insights</b> across disciplines <b>necessary and sufficient</b> to address the major research question and lead to <b>substantial outcomes</b> <ul style="list-style-type: none"> <li>○ Achieves integration of the various researchers' skills and perspectives that is likely to produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Collaborative gain</u></p> <ul style="list-style-type: none"> <li>• Demonstrates to a <b>high degree</b>, comprehensive and suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources</li> <li>• Demonstrates sustainable collaborations that are <b>likely</b> to extend beyond the life of the project</li> <li>• Incorporates <b>comprehensive</b> and <b>excellent</b> strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).</li> </ul>
4 Very Good	<p>The proposed multidisciplinary research:</p> <ul style="list-style-type: none"> <li>• <b>Integrates broadly complementary</b> information, data, techniques, tools, perspectives, concepts and/or theories, from two or more disciplines or bodies of specialised knowledge, that are essential to solve a major research question that is beyond the scope of a single discipline or area of research practice:</li> </ul>	<p>The proposed research team provides <b>very good</b> synergy (diversity, multidisciplinary and collaborative gain) as it:</p> <p><u>Diversity</u></p> <ul style="list-style-type: none"> <li>• Comprises a diverse team (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise and build capacity aligned to the research question</li> </ul>

Category	Knowledge gain	Synergy
	<ul style="list-style-type: none"> <li>○ is supported by a <b>well</b> justified and reasoned hypothesis/rationale</li> <li>○ the scientific framework, design, methods and analyses <b>are well</b> developed, <b>broadly</b> complementary and integrated and <b>highly</b> appropriate <b>with a few minor concerns</b></li> <li>○ the integration of research components is <b>likely</b> to result in novel conceptual approaches and insights.</li> <li>• Demonstrates that the research proposal tackles a major question addressing an issue that is of <b>importance</b> to advance the research or health area (not prevalence or magnitude of the issue)</li> <li>• Collectively has or has access to <b>very good</b> technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes</li> <li>• <b>Likely</b> to result in <b>significant and substantial</b> changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues</li> <li>• <b>Likely</b> to lead to <b>significant</b> research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.)</li> <li>• Would be likely to be competitive with high quality, similar research proposals internationally.</li> </ul>	<ul style="list-style-type: none"> <li>○ Provides investigators diverse experience and vital perspectives, without which the research question cannot be addressed.</li> </ul> <p><b>AND</b></p> <p><u>Multidisciplinarity</u></p> <ul style="list-style-type: none"> <li>• <b>Broadly</b> demonstrates why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily</li> <li>• Integrates researchers with <b>complementary expertise and insights</b> across disciplines <b>necessary and sufficient</b> to address the major research question and <b>likely</b> lead to <b>substantial outcomes</b> <ul style="list-style-type: none"> <li>○ Achieves integration of the various researchers' skills and perspectives that <b>could</b> produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Collaborative gain</u></p> <ul style="list-style-type: none"> <li>• <b>Demonstrates comprehensive</b> and suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources</li> <li>• Demonstrates sustainable collaborations that <b>could</b> extend beyond the life of the project</li> <li>• Incorporates <b>comprehensive and very good</b> strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).</li> </ul>

Category	Knowledge gain	Synergy
3 Good	<p>The proposed multidisciplinary research:</p> <ul style="list-style-type: none"> <li>• <b>Integrates broadly complementary</b> information, data, techniques, tools, perspectives, concepts and/or theories, from two or more disciplines or bodies of specialised knowledge, essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: <ul style="list-style-type: none"> <li>○ is supported by <b>a</b> justified and <b>sound</b> hypothesis/rationale</li> <li>○ the scientific framework, design, methods and analyses <b>are</b> developed, <b>broadly</b> complementary and integrated and appropriate <b>with several minor concerns</b></li> <li>○ the integration of research components <b>could</b> result in novel conceptual approaches and insights.</li> </ul> </li> <li>• Demonstrates that the research proposal tackles a <b>major</b> question addressing an issue that is of <b>some importance</b> to advance the research or health area (not prevalence or magnitude of the issue)</li> <li>• Collectively has or has access to <b>good</b> technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes</li> <li>• <b>Could</b> result in <b>significant and substantial</b> changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues</li> <li>• <b>Could</b> lead to <b>significant</b> research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.)</li> <li>• Would be somewhat competitive with high quality, similar research proposals internationally.</li> </ul>	<p>The proposed research team provides <b>good</b> synergy (diversity, multidisciplinary and collaborative gain) as it:</p> <p><u>Diversity</u></p> <ul style="list-style-type: none"> <li>• Comprises a diverse team (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise and build capacity aligned to the research question <ul style="list-style-type: none"> <li>○ Provides investigators diverse experience and vital perspectives, without which the research question cannot be addressed.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Multidisciplinary</u></p> <ul style="list-style-type: none"> <li>• <b>Largely</b> demonstrates why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily.</li> <li>• Integrates researchers with <b>expertise and insights</b> across disciplines <b>necessary and sufficient</b> to address the major research question and <b>could</b> lead to <b>substantial outcomes</b> <ul style="list-style-type: none"> <li>○ Achieves integration of the various researchers' skills and perspectives that <b>could in general</b> produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Collaborative gain</u></p> <ul style="list-style-type: none"> <li>• <b>Demonstrates suitable</b> plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources</li> </ul>

Category	Knowledge gain	Synergy
		<ul style="list-style-type: none"> <li>• Demonstrates collaborations that <b>could</b> extend beyond the life of the project</li> <li>• Incorporates <b>clear and good</b> strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).</li> </ul>
2 Satisfactory	<p>The proposed multidisciplinary research:</p> <ul style="list-style-type: none"> <li>• <b>Integrates broadly complementary</b> information, data, techniques, tools, perspectives, concepts and/or theories, from two or more disciplines or bodies of specialised knowledge, essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: <ul style="list-style-type: none"> <li>○ is supported by <b>a reasoned</b> hypothesis/rationale</li> <li>○ the scientific framework, design, methods and analyses are generally sound, complementary and integrated but may lack clarity in some aspects and/or may contain notable weaknesses/concerns</li> <li>○ the integration of research components <b>could</b> result in <b>some</b> novel conceptual approaches and insights.</li> </ul> </li> <li>• Demonstrates that the research proposal tackles a <b>major</b> question addressing an issue that is of <b>marginal importance</b> to advance the research or health area (not prevalence or magnitude of the issue)</li> <li>• Collectively has or has access to <b>some/most but not all of the</b> technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes</li> </ul>	<p>The proposed research team provides <b>moderate synergy</b> (diversity, multidisciplinary and collaborative gain) as it:</p> <p><u>Diversity</u></p> <ul style="list-style-type: none"> <li>• Comprises a diverse team (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise and build capacity aligned to the research question <ul style="list-style-type: none"> <li>○ Provides investigators diverse experience and vital perspectives, without which the research question cannot be addressed.</li> </ul> </li> </ul> <p><b>AND</b></p> <p><u>Multidisciplinary</u></p> <ul style="list-style-type: none"> <li>• Demonstrates <b>to some degree</b> why the research <b>could</b> require the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily, <b>but poses some concerns</b>.</li> <li>• Integrates researchers with <b>expertise and insights</b> across disciplines that <b>are relevant</b> to the major research question and <b>may</b> lead to <b>improved outcomes</b>: <ul style="list-style-type: none"> <li>○ Achieves integration of the various researchers' skills and perspectives that <b>could</b> produce <b>some</b> synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects.</li> </ul> </li> </ul>

Category	Knowledge gain	Synergy
	<ul style="list-style-type: none"> <li>• <b>Could</b> result in <b>appreciable improvements/outcomes</b> in the scientific knowledge, practice or policy underpinning human health issues</li> <li>• <b>Could</b> lead to <b>moderately significant</b> research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.)</li> <li>• Would be marginally competitive with high quality, similar research proposals internationally.</li> </ul>	<p><b>AND</b></p> <p><u>Collaborative gain</u></p> <ul style="list-style-type: none"> <li>• <b>Demonstrates moderately suitable</b> plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources</li> <li>• Demonstrates <b>to some extent</b> collaborations that <b>may extend</b> beyond the life of the project.</li> <li>• Incorporates <b>moderate</b> strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).</li> </ul>
1 Marginal to Poor	<p>The proposed multidisciplinary research:</p> <ul style="list-style-type: none"> <li>• <b>Does not integrate</b> information, data, techniques, tools, perspectives, concepts and/or theories, from two or more disciplines or bodies of specialised knowledge, essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: <ul style="list-style-type: none"> <li>○ has a <b>weak</b> hypothesis/rationale</li> <li>○ the scientific framework, design, methods and analyses have significant shortcomings and may contain major weaknesses.</li> </ul> </li> <li>• <b>Fails</b> to demonstrate that the research proposal tackles a major research question</li> <li>• <b>Does not</b> have access to the technical resources, infrastructure, equipment and facilities, or access to additional expertise necessary to achieve project outcomes</li> <li>• <b>Is unlikely to</b> result in <b>improvements/outcomes</b> in the scientific</li> </ul>	<p>The proposed research team provides <b>limited synergy</b> (diversity, multidisciplinary and collaborative gain) as it:</p> <p><u>Diversity</u></p> <ul style="list-style-type: none"> <li>• <b>Does not</b> comprise a diverse team (in terms of gender, career stage and/or researchers from different cultures) or the proposed team is diverse but investigators <b>do not</b> provide diverse experience and vital perspectives aligned <b>to</b> the research question.</li> </ul> <p><b>AND</b></p> <p><u>Multidisciplinary</u></p> <ul style="list-style-type: none"> <li>• <b>Does not</b> demonstrate why the research requires the integration of knowledge from multiple disciplines and <b>has no processes</b> to ensure the research question is addressed using these different disciplines complementarily</li> <li>• <b>Does not</b> integrate researchers with <b>expertise and insights</b> across</li> </ul>

Category	Knowledge gain	Synergy
	<p>knowledge, practice or policy underpinning human health issues of <b>significance</b></p> <ul style="list-style-type: none"> <li>• <b>Is unlikely to</b> lead to research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.) of <b>significance</b></li> <li>• <b>Is unlikely to</b> be competitive with similar research proposals internationally.</li> </ul>	<p>disciplines necessary to address the major research question.</p> <p><b>AND</b></p> <p><u>Collaborative gain</u></p> <ul style="list-style-type: none"> <li>• <b>Does not demonstrate suitable</b> plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources</li> <li>• <b>Does not</b> demonstrate collaborations that are <b>likely to extend</b> beyond the life of the project</li> <li>• <b>Does not</b> incorporate strategies to integrate provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).</li> </ul>

## **Attachment G – Guidance for Assessing Applications against the Indigenous Research Excellence Criteria**

Panel members should consider the following when assessing applications that have a focus on the health of Indigenous Australians. The points below should be explicit throughout the application and not just addressed separately within the Indigenous criteria section.

### **Community Engagement**

- Does the proposal clearly demonstrate a thorough and culturally appropriate level of engagement with the Aboriginal and Torres Strait Islander community or health services prior to submission of the application?
- Is there clear evidence that the level of engagement throughout the project will ensure the feasibility of the proposed study?
- Has the application demonstrated evidence that any of the methods, objectives or key elements of the proposed work have been formed, influenced or defined by the community?
- Were the Indigenous community instrumental in identifying and inviting further research into the health issue and will the research outcomes directly benefit the 'named' communities?
- Is there a history of working together with the 'named' communities e.g. co-development of the grant, involvement in pilot studies or how the 'named' communities will have input/control over the research process and outcomes across the life of the project?

### **Benefit**

- Does the proposal clearly outline the potential health benefits (both intermediate and long term, direct and indirect) to Aboriginal and Torres Strait Islander people?
- Does the proposal demonstrate that the benefit(s) of the project have been determined or guided by Aboriginal and Torres Strait Islander people, communities or organisations themselves?

### **Sustainability and Transferability**

- Does the proposal:
  - Provide a convincing argument that the outcomes will have a positive impact on the health of Aboriginal and Torres Strait Islander peoples, which can be maintained after the study has been completed?
  - Have relevance to other Indigenous communities?
  - Clearly plan for and articulate a clear approach to knowledge translation and exchange?
  - Demonstrate that the findings are likely to be taken up in health services and/or policy?
- Will the outcomes from the study make a lasting contribution to Aboriginal and Torres Strait Islander communities and their wellbeing?

### **Building Capability**

- Does the proposal outline how Aboriginal and Torres Strait Islander people and/or communities will benefit from capability development?
- Does the proposal outline how researchers and individuals/groups associated with the research project will develop capabilities that allow them to have a greater understanding/engagement of Aboriginal and Torres Strait Islander peoples.

## Attachment H – Guidance for Assessing Applications against the Synergy Grants Assessment Criteria

Synergy Grants support outstanding multidisciplinary teams of investigators to work together to answer major questions that cannot be answered by a single investigator. The assessment criteria for Synergy Grant applications are:

- Track Record, relative to opportunity (40%)
- Knowledge Gain (30%)
- Synergy (30%).

### Track Record (40%)

NHMRC defines 'Track Record' for the Synergy Grant scheme as the value of an individual's past research achievement, relative to opportunity, not prospective achievements, using evidence-based components.

Assessment of Track Record comprises peer reviewers' consideration of:

- Publications (20%)
- Research Impact (15%)
- Leadership (5%).

#### 1. Publications

Assessment of publications will use a seven-point scoring system, supported by category descriptors. Peer reviewers will be required to form a judgement based on the applicant's publications from the past 10 years (taking into account career disruptions) and the five best publications from those 10 years, as highlighted by the applicant.

Publications category descriptors are at Table 1 of [Attachment B](#).

#### 2. Research Impact

Assessment of an applicant's research impact will be via the review of one research impact case study from an applicant's whole career. This case study will outline, including corroborating evidence:

- I. the reach and importance of the impact ('impact'),
- II. the attribution of the research to the impact ('attribution')
- III. the applicant's contribution to the research ('contribution').

These three components of research impact are assessed separately using three seven-point scoring systems supported by category descriptors (Table 2, 3 and 4 of [Attachment B](#)).

For the assessment of 'impact', the seven point scoring system is further divided for Emerging Leadership and Leadership applicants (Table 2 of [Attachment B](#)). This is to recognise that early and mid-career researchers will not have had time to accumulate research impact.

NHMRC defines the impact of research as the demonstrable benefit that research makes to knowledge, health, the economy and/or society. Impact is the effect of the research after it has been adopted, adapted for use, or used to inform further research, and incorporates research that leads to a decision not to use a particular diagnostic, treatment, health policy, etc. Research impact is verifiable outcomes from research undertaken. It is not the prospective or anticipated effects of the research.

#### Impact

Peer reviewers should consider:

- The reach of the research impact.
- Based on the evidence provided, the significance of the research impact to:
  - informing knowledge to advance research
  - improving products, processes, behaviours/prevention, policies, practices
  - improving the nation's economic performance, and/or
  - improving the health and well-being of the community.

Peer reviewers should note that applicants can demonstrate the contribution of their research program within a category of impact (knowledge, health, economic and social) or across multiple categories. If impacts are across multiple categories, the overall research impact score is determined holistically and on balance across the different categories (it is not additive).

For the purposes of assessing 'impact', NHMRC uses four specific descriptors:

- **Knowledge impact:** Research that has contributed to discoveries and/or demonstrable benefits emerging from adoption, adaptation or use of the discovery to inform further research.
- **Health impact:** Research that has contributed to improvements in health through new therapeutics, diagnostics, or disease prevention; or by contributing to improvements in: disease prevention, diagnosis and treatment, health policy, health systems, and quality of life.
- **Economic impact:** Research that has contributed to the nation's economic performance by creating new industries, jobs and valuable products, and reducing health care costs. An economic impact may also contribute to social or health impacts, including human capital gains and the value of life and health.
- **Social impact:** Research that has contributed to improvements in the health of the society, including the wellbeing of the end user and the community. This may include improved ability to access health care services and to participate socially.

'Impact' is a measure of the reach and significance of the research impact.

Reach is the extent, spread, breadth, and/or diversity of the beneficiaries to the impact, relative to the type of research impact.

Significance is the degree to which the impact has enabled, enriched, influenced, informed or changed the performance, policies, practices, products, services, understanding, awareness or well-being of the beneficiaries (not the prevalence or magnitude of the issue).

Reach and Significance should be assessed concurrently to determine the overall 'Impact' score.

### **Attribution**

Peer reviewers will consider the degree to which the applicant's research program is attributed to the impact(s) (knowledge, health, economic and/or social impact). The relationship between the applicant's research program and the impact may be foreseen or unforeseen, and may be an end product or demonstrated during the research process. Table 3 of [Attachment B](#) provides broad guidance on the expected contribution for each category rating.

### **Contribution**

Relative to opportunity and to the applicant's field of research, peer reviewers should consider the level of the applicant's contribution (e.g. leadership, intellectual and/or technical input, etc.) to the research based on robust and verifiable evidence.

A poorly or non-corroborated research contribution, should receive a score of one. Table 3 at [Attachment B](#) provides broad guidance on the expected contribution for each category rating as guidance for peer reviewers.

### 3. Leadership

There are four elements of leadership. The expected outputs for each level of Synergy Grant applicant (Emerging Leadership 1 to Leadership 3) are described at Table 5 of [Attachment B](#). For the assessment of 'Leadership' for Synergy Grant applications, peer reviewers would compare the nominated fellowship level applied for by the applicant with the outputs outlined in the category descriptors (Table 6 of [Attachment B](#)). Using a ternary, 'binning' assessment scale, peer reviewers must form a judgement as to whether the applicant is 'exceptional', 'meets requirements' or 'does not meet requirements'.

### Knowledge Gain (30%)

NHMRC defines Knowledge Gain for the Synergy Grant scheme as the quality of the proposed research and significance of the knowledge gained. It incorporates theoretical concepts, hypothesis, research design, robustness and the extent to which the research findings will contribute to the research area and health outcomes (by advancing knowledge, practice or policy).

For the assessment of Knowledge Gain peer reviewers are to consider:

- the integration of complementary information, data, techniques, tools, perspectives, concepts and/or theories from two or more disciplines that:
  - are essential to solve a major research question
  - are beyond the scope of a single discipline or area of research practice
  - are supported by a well-reasoned hypothesis/rationale
  - have highly developed, complementary, integrated and highly appropriate scientific framework/design/methods.
- whether the proposal tackles a major question addressing an issue of critical importance to advance the research or health area (not prevalence or magnitude of issue)
- access to the technical resources required to achieve project outcomes
- the potential for significant and transformative changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues
- the potential research outputs including: intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.

The significance of the study is not a measure of the prevalence/incidence of the health issue (e.g. cancer versus sudden infant death syndrome).

### Synergy (30%)

NHMRC defines 'Synergy' for the Synergy Grant scheme as the quality of a diverse team's multidisciplinary and collaborative approach to solve a major health and medical research question, while building workforce capacity.

It is essential when considering the Synergy criterion against the category descriptors that **all the descriptors relating to a particular score are met**.

For the assessment of Synergy peer reviewers are to consider:

- the diverse composition of the team (gender, career stage and/or researchers from different cultures) that will:
  - provide expertise
  - build capacity (aligned to the research question)
  - provide vital skills and perspectives, without which the research question cannot be addressed.

- a multidisciplinary approach that will:
  - provide an integrated and cohesive multidisciplinary approach (or processes to ensure relevant outcomes of different disciplines are integrated)
  - integrate researchers with complementary expertise across disciplines necessary the major research question and lead to transformative outcomes
  - foster the integration of diverse researchers' skills and expertise likely to produce sustainable synergy and novel outcomes.
- the collaborative gain that:
  - demonstrates comprehensive and suitable plan(s) for the research team to work synergistically
  - includes milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources
  - demonstrates sustainable synergies likely to extend beyond the life of the project
  - incorporates strategies in its proposal to integrate, provide mentoring and development opportunities and increase capabilities of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).

Further information on how NHMRC defines the concept of 'Synergy' is at [Attachment D](#).

Applications are assessed relative to opportunity, taking into consideration any career disruptions, where applicable (see [Attachment G](#)).

It is recognised that Aboriginal and Torres Strait Islander applicants often make additional valuable contributions to policy development, clinical/public health leadership and/or service delivery, community activities and linkages, and are often representatives on key committees. If applicable, these contributions will be considered when assessing research output and track record.

# Attachment I – Concept of ‘Synergy’

## Preamble

The Synergy Grant scheme incorporates an assessment criterion on ‘Synergy’ that will assess the merits of an applicant team’s multidisciplinary approach, the diversity of the research team and its ‘collaborative gain’.

The criterion will consider the quality of the diverse team’s multidisciplinary and collaborative approach to solve a major health and medical research question, as well as the capacity-building/workforce development outcomes.

Successful Synergy grant proposals will have an outcomes focus, demonstrating the skills essential to solve the research question, and will provide evidence of a discernible benefit over homogenous research teams (through multidisciplinary and other dimensions of diversity).

## A multiple disciplinary approach to research

Solving major research questions and achieving transformative health outcomes increasingly require new technical and intellectual approaches (new ways to conceptualise, think about and/or address a question) through a convergence of perspectives from different disciplines. Each discipline provides specific intellectual knowledge, experimental approaches, methodological considerations, analytical approaches, and theoretical context. Together, these elements provide new insights to address major and challenging research questions.

In addition to integration between the broad research areas of basic science, clinical medicine and science, public health and health services research, a multidisciplinary approach may involve single or multiple methods (i.e. qualitative, quantitative, multi methods and mix methods) across a range of research disciplines including, for example, social sciences, policy analysis, economics, engineering, mathematics and physical sciences. Such approaches may be critical to address major questions relating to health care delivery, health systems strengthening or population health.

The concept of research involving multiple disciplines is often denoted by terms such as multidisciplinary, interdisciplinary and transdisciplinary. However, the definition of these terms, and even the concept of a “discipline”, is constantly evolving and lacks consensus across different areas of health and medical research.

For the purposes of Synergy Grants, “multiple disciplinary research” covers ‘research by teams that integrate information, data, techniques, tools, perspectives, concepts, methodologies and/or theories from two or more disciplines or bodies of specialised knowledge to advance fundamental understanding or to solve questions whose solutions are beyond the scope of a single discipline or area of research practice’.

Applicants should identify a major health and medical research related question and justify:

- why it requires the integration of knowledge from multiple disciplines or bodies of specialised knowledge
- how the multiple disciplinary approach can provide novel solutions and insights that would not be achieved with a single discipline or traditional approaches
- how the research question is operationalised and addressed using different disciplines complementarily
- the sustainability of the research collaboration and scope for long term outcomes extending beyond the life of the project, and
- the methods that will keep the multiple disciplinary team focused, integrated and cohesive and that will drive outcomes.

## Diversity of research teams

NHMRC recognises the need to foster diversity in health and medical research teams beyond multiple disciplinary.

Health and medical research, from basic science to clinical and translational research, to policy formation, requires creativity and a diverse range of skillsets and viewpoints.

Research<sup>4</sup> has shown that diverse teams outperform homogeneous teams. They provide distinct perspectives, creativity and innovation, increased accountability and individual enterprise to address major research questions. A diverse workforce can provide benefits including:

- global competitiveness
- a balanced and broadened perspective in setting research priorities
- contribution to robust learning environments
- improving the breadth and quality of researchers
- improving capacity to address health disparities
- enhancing public trust, and
- increased opportunities for under-represented groups/researchers to participate in and benefit from research.

Synergy Grant research teams will foster both collaborative gain and capacity building through the recruitment of talented researchers from diverse backgrounds and groups.

Diversity in Synergy Grants could span under-represented groups in health and medical research. This could include career stage, gender and researchers from different cultures (e.g. Aboriginal and Torres Strait Islander researchers). Given the broad spectrum of research encompassed in the health and medical research sector, the opportunities to engage a particular group will depend on the type of research being undertaken. It is, however, essential that each of the investigators contributes to the scientific development and execution of the project in a substantive and measurable manner.

In addition to diversity in the research team, NHMRC strongly encourages and values collaborations with stakeholders who have direct experience and knowledge, or who are direct beneficiaries, of the proposed research. This could include consumers, community groups, policy makers and people from different cultures (such as Aboriginal and Torres Strait Islander peoples). The active involvement of these stakeholders will enhance research priority setting, increase the relevance of the research and its translation and provide critical knowledge that increases the quality and direction of the research.

Diversity is a broad concept with different dimensions and approaches across the health and medical research sector. Each of the different dimensions is important and diversity should be embraced in its broadest sense. Rather than mandate a particular approach to achieving diversity or ascribe a hierarchy of importance (e.g. gender versus career stage), NHMRC requires applicants to establish and demonstrate diversity in research teams that is aligned to the major research question of the proposal. The inclusion of a particular team member should be considered in the context of the research question, by valuing and using diverse personnel to enhance a project's quality and outcomes and advancing workforce development/capacity.

Applicants should justify the diversity within the proposed research team, by outlining:

- the type(s) of diversity fostered and how it will enhance the outcomes of the project and its scientific quality, including why the research question cannot be addressed without the proposed personnel, and
- how the team will contribute to the capacity building, mentoring, career development and diversification of the research workforce.

Examples of multiple disciplinary research teams are outlined below to illustrate the concepts in the context of Synergy Grants and are not indicative of the potential merit of an application.

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<sup>4</sup> Notice of NIH's Interest in Diversity - <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html>

Synergy Grant applications will be assessed against published assessment criteria based on the specific details of each proposal. Peer reviewers should refer to the category descriptors (Attachment B), which identify the expectations for each score across a seven point scale.

## **Examples**

An example is the development of genomics formed from genetics, molecular biology, analytical chemistry, mathematics and informatics. Genomics is now being integrated with public health research for health improvement through guidelines for appropriate use of genetic tests and services, interventions such as newborn screening for conditions and multidisciplinary population sciences to assess value and impact of genetic information in health conditions.

In cancer research, the development of screening tools for cancers may comprise teams including clinicians, research nurses, geneticists, bioinformaticians and biochemists, who identify a suitable patient cohort, obtain clinical samples, identify likely biomarkers that correlate with tumour development using genetics, define the role of that gene/protein in the development of cancer and undertake subsequent development of diagnostic tests for screening in patient cohorts.

In research into the assessment and management of cardiovascular risk, research teams that include public health researchers with qualitative and quantitative skills, clinicians with a range of expertise across the lifecycle and continuum from hospital to community care, geneticists, behavioural, biomedical engineering and informatics scientists, dietitians and exercise scientists and health consumers (especially from vulnerable population groups) are required to develop new approaches to individualised absolute risk assessment and management.

Research to address new approaches to manage antibiotic resistance could incorporate researchers from biology and biochemistry, immunology, biomedicine and pharmacology to develop new antibiotics, working with mathematicians and statisticians, as well as with behavioural scientists and economists to understand how patterns of resistance develop and develop new behavioural strategies to reduce antibiotic use or to provide incentives for appropriate use of new antibiotics.

# Attachment J – NHMRC Relative to Opportunity and Career Disruption Policy

## Purpose

The purpose of this document is to outline NHMRC's Relative to Opportunity Policy with respect to peer review and eligibility to apply for Emerging Leadership Investigator Grants and for peer review of CIs applying for Synergy Grants. The audience is applicants and peer reviewers.

NHMRC's objective is to support the best Australian health and medical research and the best researchers, at all career stages. NHMRC seeks to ensure that researchers with a variety of career experiences and those who have experienced pregnancy or a major illness/injury or have caring responsibilities, are not disadvantaged in applying for NHMRC grants.

## Policy approach

NHMRC considers Relative to Opportunity to mean that assessment processes should accurately assess an applicant's track record and associated productivity relative to stage of career, including considering whether productivity and contribution are commensurate with the opportunities available to the applicant. It also means that applicants with career disruptions should not be disadvantaged (in terms of years since they received their PhD) when determining their eligibility for Emerging Leadership Investigator Grants and that their Career Disruptions should be considered when their applications are being peer reviewed.

In alignment with NHMRC's Principles of Peer Review, particularly the principles of fairness and transparency, the following additional principles further support this objective:

- **Research opportunity:** Researchers' outputs and outcomes should reflect their opportunities to advance their career and the research they conduct.
- **Fair access:** Researchers should have access to funding support available through NHMRC grant programs consistent with their experience and career stage.
- **Career diversity:** Researchers with career paths that include time spent outside of academia should not be disadvantaged. NHMRC recognises that time spent in sectors such as industry, may enhance research outcomes for both individuals and teams.

The above principles frame NHMRC's approach to the assessment of a researcher's track record during expert review of grant applications and eligibility of applicants applying for Emerging Leadership Investigator Grants. NHMRC expects that those who provide expert assessment during peer review will give clear and explicit attention to these principles to identify the highest quality research and researchers to be funded. NHMRC recognises that life circumstances can be very varied and therefore it is not possible to implement a formulaic approach to applying Relative to Opportunity and Career Disruption considerations during peer review.

## Relative to Opportunity considerations during peer review of applications for funding

During peer review of applications, circumstances considered under the Relative to Opportunity Policy are:

- amount of time spent as an active researcher
- available resources, including situations where research is being conducted in remote or isolated communities
- building relationships of trust with Aboriginal and Torres Strait Islander communities over long periods that can impact on track record and productivity
- clinical, administrative or teaching workload
- relocation of an applicant and his/her research laboratory or clinical practice setting or other similar

circumstances that impact on research productivity

- for Aboriginal and Torres Strait Islander applicants, community obligations including 'sorry business'
- the typical performance of researchers in the research field in question
- research outputs and productivity noting time employed in other sectors. For example there might be a reduction in publications when employed in sectors such as industry
- carer responsibilities (that do not come under the Career Disruption policy below).

## **Career Disruption considerations during peer review and eligibility to apply for Emerging Leadership Investigator Grants**

A Career Disruption is defined as a prolonged interruption to an applicant's capacity to work, due to:

- pregnancy
- major illness/injury
- carer responsibilities.

The period of career disruption may be used:

- to determine an applicant's eligibility for an Emerging Leadership Investigator Grant
- to allow for the inclusion of additional track record information for assessment of an application
- for consideration by peer reviewers

To be considered for the purposes of eligibility and peer review, a period of Career Disruption is defined as:

- a continuous absence from work for 90 calendar days or more, and/or
- continuous, long-term, part-time employment (with defined %FTE) due to circumstances classified as Career Disruption, with the absence amounting to a total of 90 calendar days or more.<sup>5</sup>

## **Career Disruption and eligibility to apply for Investigator Grants**

A Career Disruption can affect an applicant's eligibility to apply for an Emerging Leadership Investigator Grant. For such grants, the 10-year time limit on the number of years post-PhD may be extended commensurate with the period of the Career Disruption.

## **Implementation**

Information on how applicants can demonstrate their track record, Relative to Opportunity, for the purposes of peer review is available in RGMS and in NHMRC's Guide to Peer Review.

Information on how applicants can demonstrate that a Career Disruption(s) affects their eligibility to apply for an Emerging Leadership Investigator Grant is also available in RGMS and in the Investigator Grant Guidelines.

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<sup>5</sup> For example, an applicant who is employed at 0.8 FTE due to childcare responsibilities would need to continue this for at least 450 calendar days to achieve a Career Disruption of 90 calendar days.