Dear Project Officer,

UNSW RESPONSE TO THE NHMRC CONSULTATION ON “CURRENT AND EMERGING ISSUES FOR NHMRC FELLOWSHIP SCHEMES”

UNSW Australia welcomes the opportunity to respond to the NHMRC’s consultation on the current and emerging issues for NHMRC fellowship schemes including: (i) the changing balance between the number of research grants available and the number of Fellowships; (ii) the structure of the Fellowship schemes; (iii) future strategic approaches; and (iv) the responsibilities of employing institutions and the health and medical research sector.

This submission has been prepared based on feedback from across UNSW’s health and medical researchers, research administrators and selected affiliated medical research institutes. This submission represents UNSW’s consolidated position in relation to the nine questions posed by the NHMRC in the consultation paper.

EXECUTIVE SUMMARY OF KEY ISSUES

1. **The NHMRC should introduce a limit on how many times fellows can reapply at the same level.** Decreasing the number of fellowships is a poor investment strategy for the future. The NHMRC should revisit the question of funding provided to support Fellowships. The funding should be sufficient to properly support the Fellowship salary at the institution that will host the Fellowship. Priority should be given to maintaining success rates in the more junior fellowship (ECF and CDF1) levels.

2. **There is a strong argument that all Fellowships should come with an associated Project grant for the duration of the Fellowship.**

3. **If there is good articulation between Fellowship schemes, such that it is possible for our best medical researchers to have a research career progression advancing from one Fellowship scheme to another, then the idea of limiting the number of times that an individual can hold a fellowship at a particular level is reasonable.** Two consecutive fellowships (including an early career fellowship) should be enough to lead to a permanent position at an institution.

4. **The current number of fellowship levels does need to change.** The number of levels could be rationalised to the equivalent of three: “Early-career”, “mid-career” and “senior” fellowships. There should be a focus on immediate fellowships for early career postdoctoral research fellows to support a transition – over time – into clinics, academia or industry.
5. All fellowships should be a minimum of 5 years in length and a maximum of 10 years based on the stage of career, with a point of review at 4 and 5 years respectively. Early career fellowships should be 5 years in length but shorter in duration than senior fellowships. 10 year fellowships should certainly be considered for senior staff where the fellow already has a strong track record and are going to continue to be productive. If the NHMRC is going to extend the early career fellowships they must consider a non-onerous peer-review process at about the 3.5-4 year stage. If the NHMRC were to extend a senior fellowship to 10 years, a peer-review process at the half way mark would be essential.

6. The NHMRC should not use fellowship schemes to support strategic priority areas other than in very broad areas of research such as the current categorisation of basic science, clinical, public health and health services. If the NHMRC was going to support particular strategic areas requiring capacity building, there is concern that the focus could shift away from research excellence and be driven by political considerations (e.g. regional vs. non-regional; immediate vs. long-term; controversial/sensitive vs. non-controversial/benign etc.). UNSW supports refinements to fellowship mechanisms which encourage women, and Aboriginal and Torres Strait Islander (ATPI) researchers, to become involved and to maintain involvement in medical research. Setting quotas for researchers whether based on sex, cultural or ethnic background should not be implemented at the cost of funding research excellence.

7. Outcomes and impact relative-to-opportunity are a better measure than the number of years post-PhD. Rethinking the definition of ECR would be useful because the current system unnecessarily excludes people from early career fellowship contention if they have made a choice to work outside research for a period after their PhDs have been completed.

8. Having a better and more clearly defined career for post-docs needs addressing at both the employer and government levels. It is not the role of the NHMRC to determine institutional hiring practices. Universities could commit to offer a continuing position to someone who has held two consecutive fellowships and where they have demonstrated research excellence throughout the fellowships.

9. Ongoing support at the end of a fellowship already occurs across many institutions who offer an additional 1 or 2 years of ongoing support, under the conditions that the researcher apply for another fellowship. The NHMRC could recommend that a single NHMRC fellowship should at least be matched by a period supported by the institution post-fellowship i.e. 5 years of Fellowship + a period from the institution, where a second consecutive fellowship has not been secured.

10. Bridging support should not be limited to early and mid-career fellows. It is probably more relevant for people at higher levels who have devoted their careers to research and may find it more difficult to find new employment/careers.

INTRODUCTION

Simon McKeon, in his 2013 report on the Strategic Review of Health and Medical Research stated:

"For many years, Australia has produced some of the best scientific and medical researchers in the world. The success of our health and medical research (HMR) has resulted in healthier Australians and led to innovations that have boosted our national wealth. As a nation, Australia has undeniably generated substantial benefits from research."

It can be argued that much of this success was the result of an increase in health and medical research funding in response to the 1998 Wills Health and Medical Research Strategic Review recommendations which saw the doubling of NHMRC competitive funding. NHMRC funding has now plateaued and while we welcome the introduction of the Medical Research Future Fund Bill\(^2\) into Parliament recently, it is still not clear how this will be targeted and how much additional funding will be made available for health and medical research in Australia. Any additional funding may well be too late to address the immediate crisis facing Australian research and the issues currently facing the health and medical research workforce.

According to the NHMRC:

> "The objective of the Research Fellowships scheme is to foster an intellectual environment which supports and builds the capacity of Australian research for the future and in so doing, creates knowledge through investment in research which improves health and thus contributes to Australia’s prosperity."

If this is the case, then we are falling significantly behind internationally in providing an enabled environment for researchers. For Australia to continue to realise the health and medical benefits of research, funding must be ramped up immediately for both contestable research project grants and research fellowships. This is consistent with McKeon’s recommendation that Australia needs to "manage, train, build capacity for and retain a high-quality research workforce"\(^4\); this goal cannot be achieved without significant investment in both people and projects.

**COMMENTS**

**Question 1:** How should NHMRC’S funding balance between research grants and fellowships be adjusted as the total number of project grants available falls progressively over the next few years?

When the system is underfunded and there is insufficient support for project grants, there have always been those who suggest that the fellowship schemes should stop. This is a perverse response especially when the NHMRC’s own data shows that fellows are (rightly) amongst the most productive of all medical researchers.

**MAINTAIN THE CURRENT BALANCE**

*The funding balance between research grants and fellowships should be kept approximately at the current ratio of Project Grants per fellowship based over the previous few years (around 2:1 awarded). Decreasing the number of fellowships is a poor investment strategy for the future.*

Maintaining success rates in Project Grants is essential to the system, but maintaining a balance between Project and Fellowship funding is even more critical. The Project Grant and Fellowship Schemes have two different purposes and we shouldn’t be looking to ‘fix’ one funding scheme at the expense of the other.

*The NHMRC should revisit the question of funding provided to support Fellowships. The funding should be sufficient to properly support the Fellowship salary at the institution that will host the Fellowship. At present there is a real and significant gap between the Fellowship support provided by the NHMRC and the salaries paid at most institutions. If a Fellowship is awarded for a specific research proposal, the funding support should fully fund the salary cost of the Fellowship.*

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\(^4\) Department of Health & Aging. OpCit, Page 32.
The number of grants awarded and the success rate of grants will wax and wane, but maintaining a strong research workforce is essential for the ongoing endeavour of research in Australia. Without an injection of new funding into both the project and fellowship schemes, there will be a further loss of highly experienced medical researchers in Australia. A loss of medical researchers in Australia will impact on the discovery of new ways to treat human disease in the future and may herald an era where there is little clinically relevant innovation in Australia.

There is the danger of ending up in a situation where there are fellowship-funded researchers, but no funding to actually carry out the science or, conversely, project grants without the research workforce to carry them out. There is a strong argument that all Fellowships should come with an associated Project grant for the duration of the Fellowship.

PRIORITISE JUNIOR FELLOWSHIPS

If the balance between the schemes is to be adjusted to maintain success rates in Project Grants over this adjustment period, priority should be given to maintaining success rates in the more junior fellowship (ECF and CDF1) levels.

Some have argued that junior health and medical researcher salaries can be easily funded from project grants. Junior research fellowships do, however, provide the particularly valuable opportunity for researchers to begin building an independent track record of their own that will help them to subsequently secure tenured employment and research funding. The need to establish a research track record is not so pressing for researchers at higher levels who have already had the opportunity to demonstrate their research prowess.

Scaling back senior fellowships would have less detrimental long-term effects on Australian health and medical research and researchers. It is, however, absolutely important to maintain a substantial level of project grant funding (as many leading Australian Scientists have university positions or positions elsewhere).

**Question 2:** To increase the turnover of NHMRC research fellows, should these schemes be seen as ‘up and out schemes’, whereby fellows wishing to reapply can only do so at a higher level?

LIMIT TO TWO CONSECUTIVE FELLOWSHIPS AT THE SAME LEVEL

If there is good articulation between Fellowship schemes, such that it is possible for our best medical researchers to have a research career progression advancing from one Fellowship scheme to another, then the idea of limiting the number of times that an individual can hold a fellowship at a particular level is reasonable.

The issue then becomes whether for the most senior Fellowships there should be the possibility of holding multiple consecutive fellowships.

TRANSFER TO CONTINUING APPOINTMENTS AFTER TWO CONSECUTIVE FELLOWSHIPS

Two consecutive fellowships (including an early career fellowship) should be enough to lead to a permanent position at an institution. If a researcher gets two successive fellowships from the NHMRC, then the host institution (University, Research Institute etc.) could become their employer post-fellowship. This proposal would need to form part of the package when submitting a fellowship application to the NHMRC and be part of the conditions of award of a fellowship. If the host institution was to guarantee any ongoing employment post-fellowship, institutions would require a significant performance review towards the end of the fellowship against clearly defined and articulated performance expectations which are set at the commencement of the fellowship and determined by the administering institution. There would be a significant impact (reduction) on the number of Fellowship applications. Many smaller institutions e.g. some of the MRIs may find it difficult or impossible to guarantee continuing employment post-Fellowship.
The current challenge facing Australia is that the NHMRC fellowship schemes are already perceived as "up-and-out" schemes by many, whereby they provide temporary, short-term support for those looking for more permanent careers in clinical or academic settings. The health system in Australia does not have the resources to support an increase in clinical researchers on a continuing basis and the university system could embrace some tenure-track-style appointments that may allow clinical researchers to teach and perform fundamental medical research.

**Question 3:** Are there too many fellowship levels? Does this structure impede the career progression of rapidly rising stars in health and medical research?

*The current number of fellowship levels does need to change. The number of levels could be rationalised to the equivalent of three: “Early-career”, “mid-career” and “senior” fellowships.* The Fellowships should align and there should be no impediment for a very strong applicant to rise rapidly though the levels.

The current step up from ECF to CDF is too great, which means that it is very difficult to progress directly from ECF to CDF. There may be a number of levels but at the early-to-mid-career level, the schemes are not well-articulated.

*There should be a focus on immediate early career postdoctoral fellows to support their transition, in time, into clinics, academia or industry.*

In some areas, particularly public health and clinical research, it needs to be recognised that PhDs may only be undertaken after people have substantial career experience.

**Question 4:** Taking into account that awarding longer grants means fewer grants overall in steady state funding, should NHMRC extend the duration of early career fellowships to more than four years? Should the career development fellowship be extended beyond 5 years to, say, seven or ten years?

*All fellowships should be a minimum of 5 years in length and a maximum of 10 years based on the stage of career, with a point of review at 4 and 5 years respectively.* All fellowships should have a component of salary support (10 – 20 %) from the administering organisation, which then requires the fellow to perform teaching or other duties at the host institution. This would enable the tenure-track process to work more effectively.

*Early career fellowships should be 5 years in length but shorter in duration than senior fellowships.* It is too easy to make mistakes in selection at early career stages, and a 5 year fellowship is long enough to allow the fellow to become productive and demonstrate that they can build and lead a research team, and produce high quality research outcomes, but not too long if they aren't progressing. Conversely, *10 year fellowships for senior staff where the fellow already has a strong track record and are going to continue to be productive should be considered.*

Extending the length of fellowship could create a more realistic career pathway between early- to mid to senior fellowships. It would also give fellows time to develop a strong track record of research outputs and obtain project grant funding. It is very difficult for early career researchers to demonstrate significant achievements in 3-4 years. Longer fellowships will create more certainty for researchers and allow them to tackle more high-impact significant projects.

It is recognised that any extension in early career fellowship lengths will reduce the total numbers offered. *If the NHMRC is going to extend the early career fellowships they must consider a non-onerous peer-review process at about the 3.5-4 year stage.* This could be a request for the fellow to demonstrate to a panel what substantive progress had been made to date. Likewise, *if the NHMRC were to extend a senior fellowship to 10 years, it would seem that a peer-review process at the halfway mark would be essential.* This review mechanism would ensure that the fellows stay on track and stay motivated.
Question 5: Should NHMRC identify particular areas that require capacity building for the future and maintain support for those areas for a long enough time to make a difference? What else should be done to support women and increase participation and success by Aboriginal and Torres Strait Islander researchers?

AREAS REQUIRING CAPACITY BUILDING

The NHMRC should not use fellowship schemes to support strategic priority areas other than in very broad areas of research such as the current categorisation of basic science, clinical, public health and health services. Most priority areas (such as bioinformatics) can fit within these broad areas. The current system whereby strategic priority areas are supported by calls for special research grants seems more appropriate and more flexible to fit in with potential changing priorities. Fellowships should maintain a stable, high-achieving research workforce in the core general areas of health and medical research. If the NHMRC were going to support particular strategic areas requiring capacity building, there is concern that the focus could shift away from research excellence and be driven by political considerations (e.g. regional vs. non-regional; immediate vs. long-term; controversial/sensitive vs. non-controversial/benign etc.).

It is important that investigator-driven research should not be overshadowed by any need for building capacity in strategic priority areas. If the NHMRC is concerned about capacity building, it could be added as a selection criterion for senior research fellowships.

Further, funding fellowships in particular priority disease areas sets up lobbying wars about the importance of specific diseases and this is counter-productive.

The fellowship criteria should be broadened to not only include the normal hard metrics but also to better accommodate researchers who are looking closely at key problems in health service delivery under the Australian system, at Aboriginal health or who are setting up difficult field research in developing countries, where there are long lead times and few significant outputs and impacts in early years.

The fellowship criteria should also recognise people who work in disciplines that are crucial to collaborative research endeavours but are generally not the "lead" discipline on the project. Examples include biostatisticians, bioinformaticians and mathematical modellers.

The NHMRC should have a stronger strategic position in relation to research with developing countries, particularly in our region. The criteria for fellowships should encourage medium and long-term placements and appointments with partner organisations in the region. Topic of research relevant to developing countries of the region should be part of the NHMRC’s explicit brief for fellowship applicants. Improving health outcomes in our region will help Australia.

SUPPORT FOR WOMEN AND ABORIGINAL AND TORRES STRAIT ISLANDER [NHMRC has removed the use of this acronym throughout this question and spelt out in full] RESEARCHERS

As an overarching comment, UNSW supports refinements to fellowship mechanisms which encourage women and Aboriginal and Torres Strait Islander researchers to become involved and to maintain involvement in medical research.

The NHMRC could set aside an appropriate number of fellowships for women and another set for indigenous researchers, then the top people in every group will be supported. Setting quotas for researchers whether based on sex, cultural or ethnic background should not be implemented at the cost of funding research excellence. One woman researcher commented: “I am very much against positions and fellowships that are only open to women – merit-based selection is the key to equality.” There are other ways that the NHMRC could support women and Aboriginal and Torres Strait Islander researchers including:

- Support for women and Aboriginal and Torres Strait Islander researchers (and indeed researchers of ethnic or other backgrounds which NHMRC does not specifically address) could be improved by the NHMRC considering training their assessment panels in reducing any bias and making panels aware of such biases. Some calibration could also be achieved through selective blinding of assessors and ensuring that assessment panels are balanced in terms of diversity.
Feedback received from one researcher suggests that if the NHMRC were to introduce any change to the fellowship schemes to assist women researchers, then the assessment process scoring would need to change. They write:

"I applied for and was interviewed for promotion to PRF two years ago and it seems my application was given two scores: the score for promotion must have been low because I was not promoted; the score for renewal was so high (the highest by a woman in the biomedical sciences) that I was given the Elisabeth Blackburn Fellowship. Apart from a potential PR disaster ("the best woman in the biomedical sciences is not good enough for promotion" or "The NHMRC celebrates the achievement by women but doesn’t promote them"), it is difficult to reconcile how the same application written by the same Fellow and assessed by the same panel could receive such different scores. This could be easily fixed by giving only 1 score and promoting the top x% as well as limiting the number of times one can be appointed at the same level i.e. limiting the number of times one could potentially renew a fellowship at the same level."

Another way to encourage participation from women and Aboriginal and Torres Strait Islander researchers is to identify and highlight role models already funded by the system through a mentoring scheme.

Where career disruption is an issue, the NHMRC could revisit the way in which allowances are made for disruption when evaluating track record. Another would be to reduce the weight placed on track record and place more weight on the quality of the research proposal. Track record is weighted less-heavily for the Project Grants compared to the Fellowships and the NHMRC should consider whether the Fellowship schemes should be re-weighted to be more in line with the Project Grants.

Providing career support to women while on fellowships would be a practical way to support women in research.

Question 6: Is there a better solution to encouraging diversity in careers than those based on years post-PhD?

Years-post-PhD does have the advantage of being quantifiable without requiring an individual judgement for every case. Nonetheless, outcomes and impact relative-to-opportunity are a better measure than years post-PhD and these take into account research career interruptions; whether it be for family or professional experience or other reasons.

Rethinking the definition of ECR would be useful because the current system unnecessarily excludes people from early career fellowship contention if they have made a choice to work outside research for a period after their PhDs have been completed. Even a full time teaching role makes it difficult to achieve at the level required to be competitive for an early career fellowship in the current climate. The current exclusion after 2 years means that the system is missing out on people coming back into the research workforce from important 'real world' experience into research.

The low success rate of mid-career fellowships and the 'drought' of academic positions in the US and Europe post GFC, has meant that more researchers stay in 'postdocs' for longer until they find an independent position (if they do). So the number of years post-PhD is a somewhat artificial definition of a career stage. A better way would be to consider the research track record of the last 5 years only, for candidates who were awarded their PhD more than 5 years ago.

Question 7: Should employing institutions be expected to provide more certainty to their employees than they do now?

Having a better and more clearly defined career for post-docs needs addressing at both the employer and government levels. Too many people can end up as career post-docs on soft money for many years, with all the associated risks and lack of career development.
While it is not the role of the NHMRC to determine institutional hiring practices, institutions do not like letting their researchers go and many institutions do already provide post-Fellowship support. Should the NHMRC recommend the requirement for post-Fellowship support, any such decision should be made by the administering organisation, in good faith, against clearly defined and articulated performance expectations. These decisions should be made near the end of the fellowship when institutions are better able to judge, and are better placed to judge, the performance of the Fellow.

**Universities could commit to offer a continuing position to someone who has held two consecutive fellowships and where they have demonstrated research excellence throughout the fellowships.** Institutions could be expected to provide more certainty to employees who demonstrate research excellence in an area aligned with the institutional research priorities and the Fellow's ability to contribute to clinical, teaching or other duties which would be required of the fellow as they complete the term of the fellowship.

**Question 8:** Would this be achieved if NHMRC required institutions to commit to one or more years of ongoing support for researchers exiting from NHMRC fellowships?

**Ongoing support at the end of a fellowship is already occurring across many institutions who offer an additional 1 or 2 years of ongoing support, on the condition that the researcher applies for another fellowship.** This is a short-term transitional arrangement which doesn't address the long-term employment of these high level researchers. It does provide a Fellow additional time to look around for a new post or another chance for the next fellowship round.

**The NHMRC could recommend that a single NHMRC fellowship should at least be matched by a period supported by the institution post-fellowship i.e. 5 years of Fellowship + a period from the institution, where a second consecutive fellowship has not been secured.**

There is a danger that if this was mandated by the NHMRC, that institutions would be far less willing to take on Research Fellows.

**Question 9:** Should this be restricted to early career and career development fellows?

**Bridging support should not be limited to early- and mid-career fellows. It is probably more relevant for people at higher levels who have devoted their careers to research and may find it more difficult to find new employment/careers.**

UNSW would welcome the opportunity to contribute further to the NHMRC's Consultation on current and emerging issues for NHMRC fellowship schemes.

Yours faithfully,

[Signature]

30/6/15.

Professor Les Field  
Vice-President and Deputy Vice-Chancellor (Research)