



Laurent Rivory

Acting Deputy Vice-Chancellor (Research)

4 May 2015

Professor Anne Kelso AO
Chief Executive Officer
National Health and Medical Research Council

On-line: <http://consultations.nhmrc.gov.au/>

Dear Professor Kelso,

Current and emerging issues for – NHMRC Fellowship Schemes, Consultation Paper

Thank you for the opportunity to provide input on the future of the NHMRC fellowship schemes through the recently released consultation paper. The University of Sydney recognises there is a pressing need to address the serious challenges the NHMRC faces as a result of capacity in the health and medical research (HMR) sector following a sustained period of funding growth, and trends towards longer and larger grants, as available funding plateaus and reduces in real terms.

The trends documented in the consultation paper are well understood across the University's health disciplines and the research system more broadly. Many excellent researchers have already left the field, or are pursuing opportunities overseas, because of the increasing career uncertainty they face in Australia.

Competition for fellowships and project grants is intense and the pressure is being felt across the board. The pressure is particularly acute, however, for new PhD graduates seeking entry to a research career in Australia, for female researchers who continue to be under-represented at all levels, and for established researchers who may be left with limited career options in the event of losing a fellowship.

It is therefore vital that the NHMRC considers the specific issues facing its fellowship schemes, not just alongside the project grant scheme, but within the context of the broader challenges the interdependent health and higher education sectors face, as well as the likely future direction and levels of funding from all sources.

For example, a critical issue for employing organisations remains the growing gap between what the NHMRC provides for fellowship and grants, and the true cost of supporting the research. These costs include the direct salary gap, which at Sydney currently ranges from \$18,000 to \$74,000 annually depending on the scheme, but also indirect costs which are currently more than a dollar for every dollar of nationally competitive grant income.

The policy response must also depend on the outcome of current discussions about how funds from the Medical Research Future Fund (MRFF) will be distributed if the fund is established. While the creation of a dedicated funding stream for HMR is on its face an excellent idea, its value will depend on how the funds are administered.

The quality and impact of Australia's health and medical research compared to international benchmarks is well documented. This strength stems largely from the commitments successive governments have made to grow national investment in the highest quality HMR through competitive peer review as is the case in the United States, Europe and elsewhere.

As the consultation paper notes, NHMRC administered funding grew particularly strongly from 2000 to 2013, following the Wills Review of 1998 and the bipartisan support that followed about the importance of building Australia's capacity for world class HMR research. The University of Sydney and its affiliated MRIs and health services have benefited from the decades of Commonwealth investment that has occurred through the NHMRC, but also through Commonwealth and state funding for the public health and hospital systems that has included education and research components.

This strong growth is reflected in the University of Sydney's HMR data over the last decade. In 2005 the University and its affiliates hosted 61 NHMRC fellows and administered 152 project grants. In 2014, we hosted 153 fellows and administered 247 project grants.

For the period 2005 to 2009 University of Sydney publications linked to NHMRC funding had a relative citation impact 60 per cent above the world average, compared to 5 per cent above the world average for our publications in the same fields not supported by the NHMRC. In the 2012 ERA, the University achieved an overall rating of 5 ("outstanding - well above world standard") in the broad field of medical and health sciences. The quality and translational impact of University and affiliated researchers was also recognised recently through the designation of Sydney Health Partners as one of four inaugural NHMRC Advanced Health Research Translation Centres.

Our NHMRC fellows are consistently among our most productive researchers in terms of grant income, publication output and research impact. Hosting NHMRC fellows and conducting research supported by NHMRC project and program grants has been critical for our capacity to educate and mentor the next generation of health clinicians and researchers, and has contributed significantly to our performance in global university rankings. This is in turn vital for our capacity to collaborate with the leading institutions internationally, and attract outstanding students and staff from around the world. Our attached response to the consultation questions includes a range of indicative comments and practical suggestions that have emerged from our discussions about the consultation paper with our current fellows, other internal stakeholders and affiliated MRIs.

We are committed to working with the Government, the NHMRC and all stakeholders to secure the strongest possible future for Australia's high quality health and medical research system.

Yours sincerely,

Original signed

Professor Laurent Rivory
Acting Deputy Vice-Chancellor (Research)

**Attachment – University of Sydney response to NHMRC Fellowship Schemes
Consultation Paper, June 2015**

University of Sydney response to NHMRC Fellowship Schemes Consultation Paper, June 2015

Issue 1: The balance is changing between the number of research grants available and the number of Fellowships

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?

The University of Sydney's response to this consultation question should be read alongside the covering letter we have provided to the NHMRC CEO.

As the consultation paper notes, the McKeon Review of 2013 did recommend a move to more 4 and 5 year project grants. However, the review also recommended the adoption of a national health system investment target of 3-4 per cent of total government health expenditure, including an additional \$1.5 billion *per annum* for competitive HMR research programs within 10 years.

Like the landmark Wills Review of 1998, which catalysed the decade of NHMRC funding growth documented in the discussion paper, the McKeon Review made the above recommendations because it concluded that continuing to grow Australia's level of investment in HMR was vital if we aspire to deliver better health outcomes for all Australians, create and build national wealth, and ensure the efficiency and sustainability of the health system. It also recognised that continued growth in nationally competitive, peer reviewed fellowship and grant schemes, would need to remain an important part of the overall strategy.

The preferred outcome is therefore for additional funding to be found from the MRFF or an alternative source to return funding for NHMRC fellowships and projects to a growth trajectory. If additional funding is secured it should be used to: increase the number of project grants available over the next 3-4 years as the transition is made to higher proportion of 4-5 year grants; consolidate the fellowship scheme by increasing the value of each fellowship; and to establish a viable step down transition scheme for unsuccessful reapplying fellows in partnership with employing institutions.

Both NHMRC fellowships and projects grants are vital, but they serve different purposes. People support (fellowships) is essential, but research support (projects and program grants) is also vital as it enables research undertaken by fellows and non-fellows, and provides pathways to HMR careers. All elements of the HMR funding system (people, projects, infrastructure) need to be supported if the system is to function effectively and deliver strong health and economic outcomes for the nation. The rationale for increasing the proportion of project grants that are 4-5 years in duration was made clear by the McKeon Review. There should be no reduction in funding for fellowships to improve success rates for project grants and increase the ratio between fellowships and project grants. Other steps can be taken to reduce the pressure on the project grant scheme. Strategies are needed to ensure the optimal targeting and sizing of grants, such as keeping options for shorter and smaller grants during the transition to generally longer grants, and the introduction of caps on the number of grants that can be held per researcher.

Indicative comments from our internal consultations

"Fellowships foster innovation with fellows being able to find additional funds to progress their ideas... Projects are inherently more conservative." ECF

"People support is essential. The most interesting data is to understand how important the research leaders are – I don't think there is any doubt that a large proportion of research in health is driven and led by a relatively small number of people." PF

“What is needed is some metric of productivity between project grants, fellowships, program grants and CREs ... we need to see which of these is translating into papers, which is a simple measure, or citations or similar..” RF

“The amount of time that researchers waste preparing multiple applications is ridiculous given the low return.” CDF

“There’s no point having research fellows who have no money to do research.” ECF

Ideas for changes arising from our consultations

Project grants

- Reduce the limit on the number of project grants that can be held concurrently by an investigator
- Allow awards of five year project grants only to fellowship holders and limit to 1 at a time.
- Place a limit on the number of new project grant applications that can be submitted by an investigator in any given year.
- Model the impact of any proposed changes such as the preceding 3 points before implementing same.
- Introduce a two-stage project application process: an Expression of Interest (EoI) then a full application.
- Require panels to consider applications relative to value for money for projects rated similarly but at different scales - e.g., a multi-million dollar 5 year trial versus a large number of small and short projects.
- Retain a funding stream for smaller and shorter projects targeted at ECR and CDFs.

Fellowships

- Use non fellows and international assessors to maximise independence.
- Tie project funding to ECFs and CDFs for the life of the fellowship.

Issue 2: Is the structure of NHMRC fellowship schemes appropriate for 2015 and beyond?

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?

The University of Sydney’s response to this consultation question should be read alongside the covering letter we have provided to the NHMRC CEO.

If the purpose of the NHMRC and its fellowship schemes is to build and sustain national capacity for HMR by supporting the most outstanding researchers and research, should the policy objective be achieving ‘turnover’ or funding the best candidates on their merit relative to opportunity? The already extremely competitive nature of the research fellowships is demonstrated by the numbers of SRF applicants who are professors or associate professors.

Unless growth funding is secured to provide for more fellowships, requiring Senior Research Fellows and above to be promoted at every reapplication would inevitably result in an even more top heavy scheme, able to support fewer fellows because of the higher cost. Such a move would not only exacerbate the ‘fellowship pyramid’ documented in the consultation paper, but over time would be likely to serve to reduce the quality of the research. It would also be likely to further disadvantage female researchers and others who have experienced career disruptions.

Indicative comments from our internal consultations

“Fellows should only be able to hold a fellowship at a particular level once. The current system is biased towards older academics and severely hampers entry into the academy for many young researchers.” ECF

“Once a researcher reaches the SPRF level they should be allowed to hold that fellowship repeatedly, provided they are competitive when reapplying. The last thing we want is for our top senior researchers to head overseas as soon as their SPRF finishes.” ECF

“All fellowship schemes (including Early-Career and Career Development Fellowships) should be 5-8 years duration, to provide more certainty, career stability and capacity to conduct longer-term research projects and student supervision.” CDF

“Holding each Fellowship only once selects against people at the senior level who are often doing the most high-profile work.” SRF

Ideas for changes arising from our consultations

- If an up an out approach is adopted, it should apply up to SPRF, but from that point renewal should be based on merit.

See response below to questions 7-9

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 University of Sydney’s response to this consultation question should be read alongside the covering letter we have provided to the NHMRC CEO.

Indicative comments from our internal consultations

“it is certainly worth considering the possibility of having fewer fellowship levels, with each fellowship lasting for longer than those under the current structure.” ECF

“The bigger issue relates to the fact that none of these Fellowships are meeting the actual cost of these positions with a reliance on the Institute to meet shortfalls.” CDF

“Rapidly rising stars can always jump a level(s) if they choose too, as there is no restriction on the minimum number of years since PhD at research fellowship levels.” CDF

“The fellowship system was originally set up to provide a Career Structure for Research Scientists.” SPRF

“The problem is ECFs and CDFs are not really for early career people any more.” SPRF

Ideas for changes arising from our consultations

- Recalibrate the steps in the fellowship system to provide opportunities for fellows at different career stages – noting gaps between PhD and ECF and CDF and SRF.
- Extend the length of ECF and CDF fellowships to 5 years.
- Ensure the quality of ECF and CDF recipients is really high, and offset the cost of lengthening these fellowships by reducing the number of ECFs.
- Treat the practitioner fellowships as a separate stream.

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?

The University of Sydney's response to this consultation question should be read alongside the covering letter we have provided to the NHMRC CEO.

Indicative comments from our internal consultations

"The current system where ECF and CDF are 4 years mean that you spend a substantial amount of time in your fellowship writing for the next fellowship funding. Increasing the length to 5 years would give more stability and free up time to do actual research." CDF

Ideas for changes arising from our consultations

- Increase the duration of ECFs and CDFs to 5 years.

Issue 3: Should there be a stronger strategic approach to granting Fellowships?

Question 5: Should NHMRC identify particular areas that require capacity building for the future and maintain support for those areas for 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?

The University of Sydney's response to this consultation question should be read alongside the covering letter we have provided to the NHMRC CEO.

Indicative comments from our internal consultations

"Priorities in research seem to move far too quickly, and be quite subjective, to be a sensible basis for a career funding scheme." SRF

"Strategic priorities do not reflect the future, only the present or near term, and are often politically biased and far from cutting edge. The overall effect is to reinforce unexciting predictable science and to suppress unexpected discovery." SPRF

"Translating research into community outcomes and developing partnership is something that should be encouraged at the CDF level given that now it is a strong focus of NHMRC/ government goals; but the limited time (4 years) and heavy publication focus does not really provide the framework to do this." CDF

"As a female scientist, I am highly concerned regarding the lack of women in the higher echelons of the NHMRC Fellowship Scheme. What does this picture portray about my future career in science?" CDF

"I am a female CDF Level 1 and I have to say that getting my track record to the level needed for SRF may be almost impossible. This is not due to my ability, enthusiasm or hard work but a practical thing. I am a single mother, it is difficult for me to travel and I do have restrictions in terms of how many hours I can physically work in a week." CDF

Ideas for changes arising from our consultations

- Ensure the focus of fellowships schemes remains on supporting excellence.
- Strengthen consideration of 'relative to opportunity' criteria, and allow information to be included beyond the last five years.
- Fund strategic priority areas outside of the fellowship scheme, but ensure funding for such schemes is sustainable over the long term.
- Increase the emphasis in selection criteria on the potential to achieve translational outcomes.

- Consider part-time (longer) fellowships for female researchers, and researchers with caring responsibilities for young children, the disabled, elderly parents, etc.

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

The University of Sydney's response to this consultation question should be read alongside the covering letter we have provided to the NHMRC CEO.

Indicative comments from our internal consultations

"I favour expanding the consideration of "relative to opportunity" criteria so that we foster diversity in the fellows (more women and ATSI researchers)." ARC FF

"The "years post-PhD" is not an informative measure. It is more appropriate to take into account the "scientific age" in the context of the cumulative period of productive career output.' SPRF

Ideas for changes arising from our consultations

- Consider applicants based on "scientific age" rather than "years post doc".
- Define criteria to evaluate accomplishments relative to opportunity for researchers pursuing non-traditional pathways: ECRs, clinician researchers, female and ATSI applicants.
- Include opportunities to showcase skills outside academia that demonstrate or support research experience.
- Consider reentry fellowships for clinician researchers, and other researchers pursuing non-traditional pathways. The latter are particularly important in the allied health areas including nursing.

Issue 4: Responsibilities of employing institutions and the health and medical research sector

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

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?

Question 9: Should this be restricted to Early Career and Career Development Fellows?

The University of Sydney's response to these consultation questions should be read alongside the covering letter we have provided to the NHMRC CEO

The gap between what the NHMRC provides for fellowship and grants, and the true cost to employing institutions of supporting fellows and grants, has grown to levels that are unsustainable under current funding arrangements for higher education and research. Currently, the indicative salary gap for University of Sydney NHMRC fellows ranges from \$18,000 to \$74,000, while the shortfall for project grant professional support packages ranges from \$18,000 to \$59,000. Meanwhile, the Department of Education and Training estimates that every dollar of nationally competitive grant income costs the University \$1.14 in indirect support, and research block grant income intended to meet these costs continues to track at below 30 cents in the dollar.

As a result the University can only meet the full costs of conducting research partly funded by nationally competitive grant schemes through heavy cross-subsidisation from revenue derived from other sources. This of course has implications not only to provide

career pathways for unsuccessful reapplying fellows but for the pursuit of our broader educational mission, the level of financial and pastoral support we can provide students, and for our capacity to invest in infrastructure renewal.

Given the extent to which employing institutions are already required to top up fellows' salaries, and the current financial challenges facing most universities and MRIs, it is unrealistic under current funding settings, to expect that they will be able to offer all unsuccessful fellows ongoing positions. Moreover, from a practical human resources perspective, it very difficult for universities to 'hold' teaching and research positions indefinitely in anticipation that fellows may lose their fellowships. Some fellows might not be the best candidates for standard academic roles. If universities are to be required to guarantee step down roles in the event of a fellow losing his or her grant, then apart from finding a way to address the financial cost, evaluation of teaching and service ability would need to occur as part of the fellowship application process.

Nevertheless, if there is to be no growth in funding for fellowships in the next 4-5 years, and the length of fellowships is to be extended, we recognise that national and institutional strategies will be required to minimise the damage that is done to our HMR capacity. We are keen to engage with the NHMRC and other stakeholders to try to find a solution to this very challenging problem.

Indicative comments from our internal consultations

"... to avoid too much attrition of top scientists in the up and out scheme, an NHMRC-funded bridging support mechanism to top candidates could be a good compromise." SRF

"It is easy to say that universities must provide more security but the money has to come from somewhere, and the government has progressively squeezed universities harder and harder and push them towards decisions that generate income and reduce expenditure. It doesn't help researchers if universities are unwilling to take on researchers with fellowships. I think this this is a good idea but unfeasible." ECF

"Salary gaps are a bigger issue." ECF

"Yes, but possibly only to more senior level... so that this is financially viable for the employers. Otherwise mandating such a policy may mean that employers stop employing ECRs and CDFs, as the costs would be too high in the long term, and the plan could backfire and lead to further hardships for ECRs and CDFs." SRF

Ideas for changes arising from our consultations

- Secure growth funding from the MRFF or another source to support the fellowship scheme.

If growth funding cannot be secured

- Require employing institutions to have transparent policies in place regarding the treatment of unsuccessful reapplying fellows, so that fellowship holders have certainty about where they stand in advance of losing their fellowships.
- Consider maintaining the total number of fellows at existing levels, or reducing their number gradually over time, and funding a greater share of their true costs.
- Work with employing institutions to develop a viable, and adequately funded, step down scheme for unsuccessful fellows at Senior Research Fellow level and above. For the reasons outlined above, however, we would strongly oppose any mandated NHMRC requirement for employing institutions to establish, and fully fund, such a scheme as a requirement for eligibility to host NHMRC fellows.