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CONSULTATION PAPER

ARC Discovery Program

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Research in the national interest

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Chief Executive Officer's Foreword

On behalf of the Australian Research Council (ARC), I am pleased to release the ARC Discovery Program Consultation Paper.

A key objective of the ARC is to build research capacity. An important element of that is fostering the research careers of Australia's best and brightest researchers. In response to the 2010 consultation paper, *Meeting Australia's research workforce needs* there was concern expressed about funding individual researchers at various stages of their careers. There were mixed views about whether there should be more support for early career or mid-career researchers, but clear support for creating more seamless and explicit career options. The ARC has reflected on its role in addressing these challenges. It has concluded that addressing early-career researchers and simplifying its fellowships programs would be a significant contribution to research workforce planning.

Minister Carr has encouraged us to embrace innovative thinking, to identify key priorities and initiatives and refocus our resources accordingly. The increased support for early-career researchers is one such priority. This paper is our first response to his invitation to innovate and prioritise. We believe that with the proposed changes to the *Discovery Projects* scheme and some consequent innovations to the larger group of Discovery Fellowships, we can increase our focus on research workforce creation and development, reduce unnecessary overlap, remove areas of current inequity and simplify our schemes. Any change to the *Discovery Projects* scheme will also have an impact on other ARC schemes including timing of schemes. Some of these impacts are outlined here but we also welcome further comments.

I invite researchers, research organisations, potential partner organisations as well as other interested parties to be involved in this consultation by submitting their feedback in response to the proposed changes outlined in this Consultation Paper. We are confident in the broad directions of change indicated in this paper, but would especially welcome commentary about details and implementation.

I look forward to receiving your contribution to this consultation process.

Professor Margaret Sheil
Chief Executive Officer
Australian Research Council

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1. This consultation

1.1 Purpose

The ARC has identified a number of changes that aim to increase support for early-career researchers (ECRs), reduce overlap and streamline the *Discovery Projects* scheme. This Consultation Paper seeks your comments on proposed changes to the scheme.

The proposed changes aim to achieve more focussed support for research fellows, give a clearer focus to ECR support while supporting a strategy to build future research capacity. Fellowships are an integral part of funding provided by the ARC (see **Attachment A**). The ARC has been reviewing its schemes to obtain maximum value from this funding, and to identify strategic priorities. The purpose of this consultation is to review the *Discovery Projects* scheme and its relationship to the other Discovery Programs within the National Competitive Grants Program (NCGP), and propose a number of changes. We propose to establish a new, separately assessed element of the Discovery Program for early career researchers, a single career award within *Discovery Projects*, and reduce overlap of fellowships within the Discovery Program. We seek input to assist us in introducing these reforms.

1.2 Context

There are a number of contextual matters that are relevant to the changes being proposed at this time:

- The Australian Government's 2008 announcement that it would support 1000 new *Future Fellowships*, including in health and medical research, through the ARC.
- *Future Fellowships* have significantly boosted mid-career opportunities.
- The Research Workforce Strategy: The Australian Government has identified the vital importance of skilled researchers to its future vision for Australia's Innovation System.
- Supporting related, but diverse, pathways for research-only and teaching/research academics at strategic points of their careers has been identified as one of the ARC's major challenges.
- There is a need to clarify the role and articulation of fellowships throughout all schemes.
- The ARC has hosted a number of discussions about ECR and gender to understand their relationship and thereby propose a means to address disadvantage in success rates.

1.3 Submitting comments

To assist the ARC in compiling and analysing the views of individuals and groups, respondents are requested to submit their comments using the template provided on the ARC website.

The consultation will run for four weeks. Comments should be submitted by mail or email to the address shown on the template by 1 December 2010,

Any queries concerning the consultation process or issues raised in this paper should be directed to:

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2. Background

2.1 The Australian Research Council

The ARC is a statutory authority within the Australian Government's Innovation, Industry, Science and Research portfolio. The ARC advises the Government on research matters and manages the National Competitive Grants Program (NCGP), a significant component of Australia's investment in research and development. It is also responsible for the *Excellence in Research for Australia* (ERA) initiative—Australian research quality and evaluation system.

Through the NCGP, the ARC supports the highest quality fundamental and applied research and research training through national competition across all disciplines. The NCGP comprises two elements—Discovery, which supports individual researchers and projects, and Linkage, which supports partnerships between academic researchers and industry, government and community organisations as well as the international community.

Through ERA the ARC will assess research quality in universities using a combination of metrics and expert review by committees comprising experienced, internationally-recognised experts. The ERA framework aims to: identify excellence across the full spectrum of research activity; compare Australia's university research effort against international benchmarks; create incentives to improve the quality of research; and identify emerging research areas and opportunities for further development.

The ARC Chief Executive Officer, Professor Margaret Sheil, is guided by the ARC Advisory Council on strategic issues, policy matters and matters relating to the evaluation of the quality and outcomes of research and research training.

2.2 Discovery Program

The Discovery Program within the NCGP comprises four research funding schemes:

- *Discovery Projects*
- *Discovery Indigenous Researchers Development*
- *Future Fellowships*
- *Australian Laureate Fellowships*.

The changes outlined in this Consultation Paper relate directly to the *Discovery Projects* scheme and indirectly to the *Future Fellowships* scheme.

2.3 *Discovery Projects* scheme—Overview

The *Discovery Projects* scheme is the main scheme of the Discovery Program of the National Competitive Grants Program (NCGP). In 2009–10 the budget for the scheme was approximately $304.1 million.

The first selection round under the *Discovery Projects* scheme was conducted in 2001 for funding commencing in 2002. The scheme brought together two separate schemes–*ARC Large Research Grants* and *ARC Research Fellowships*. The stated aim in bringing the schemes together was to improve efficiency, flexibility and simplify administration.

The objectives of the *Discovery Projects* scheme are to:

- support excellent fundamental research by individuals and teams
- enhance the scale and focus of research in the national research priorities
- expand Australia's knowledge base and research capability
- encourage research and research training in high-quality research environments
- enhance international collaboration in research
- foster the international competitiveness of Australian research.

Proposals under the existing *Discovery Projects* scheme may seek funding support for:

- research projects including research personnel, teaching relief for Chief Investigators, equipment, maintenance and travel costs (both domestic and international), and International Collaboration Awards
- Australian Postdoctoral Fellowships (APD) (for early-career researchers)
- Australian Research Fellowships (ARF) / Queen Elizabeth II Fellowships (QEII) (for mid-career researchers)
- Australian Professorial Fellowships (APF) (for established researchers).

In addition, the ARC aims to award up to 15 per cent of the first-year budget to ECR-only proposals. An ECR-only proposal is one, on which, all participants on the proposal identify themselves as being ECRs. For these purposes an ECR is a researcher who has been awarded their PhD within five years of the closing date for proposals.

ECRs can also apply as part of a team with more senior researchers. In this paper these proposals are referred to as ECR-embedded proposals.

The *Discovery Projects* scheme is highly competitive with an average success rate over the past nine years of approximately 24 per cent. The number of proposals and fellowship requests received and funded under the *Discovery Projects* scheme and its component parts are summarised in Table 1 (see also **Attachment B)**.

Table 1: *Discovery Projects* scheme, 2001–2009

Submit Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Discovery Projects									
Considered	3077	3574	3240	3414	3742	4033	4112	4152	4068
Funded	784	941	875	1055	917	822	878	845	925
Success rate (%)	25.5	26.3	27.0	30.9	24.5	20.4	21.4	20.4	22.7
Australian Postdoctoral Fellowships									
Considered	440	579	489	570	679	726	676	649	654
Funded	107	114	112	112	110	110	120	109	112
Success rate (%)	24.3	19.7	22.9	19.6	16.2	15.2	17.8	16.8	17.1
Australian Research Fellowships /Queen Elizabeth II Fellowships									
Considered	216	254	226	264	292	340	372	378	359
Funded	32	32	33	32	33	58	58	57	64
Success rate (%)	14.8	12.6	14.6	12.1	11.3	17.1	15.6	15.1	17.8
Australian Professorial Fellowships									
Considered	165	172	156	176	188	210	180	203	166
Funded	23	25	24	23	25	29	28	29	27
Success rate (%)	13.9	14.5	15.4	13.1	13.3	13.8	15.6	14.3	16.3
Early-Career Researcher (ECR) Only proposals[1]									
Considered	644	861	663	747	860	869	742	682	634
Funded	156	166	138	171	155	127	128	106	98
Success rate (%)	24.2	19.3	20.8	22.9	18.0	14.6	17.3	15.5	15.5
ECR-embedded proposals[2]									
Considered	423	491	445	585	672	741	857	880	883
Funded	107	145	129	194	166	159	180	205	204
Success rate (%)	25.3	29.5	29.0	33.2	24.7	21.5	21.0	23.3	23.1

1 ECR-only proposals based on researchers self nomination in proposal

2 ECR-embedded proposals are those where there is at least one ECR and one non-ECR participant named on the proposal. Individual ECR status of researchers is based on self nomination in proposal

2.4 *Discovery Projects* scheme—Fellowships

Australian Postdoctoral Fellowships (APDs)

APDs provide opportunities for researchers at the postdoctoral level to undertake research in Australia of national and international significance, and to broaden their research experience. APDs are available for researchers with up to three years of research experience since the award of their PhD. Key features of APDs are outlined in Table 2.

Over the past nine years demand for APDs has gradually increased, from 440 applications in 2001 to 654 in 2009. In the past five years the success rate has averaged 16.6 per cent. There has also been a persistent gender difference in success rates (see **Attachment C**).

Australian Research Fellowships (ARFs) and Queen Elizabeth II Fellowships (QEIIs)

ARFs and QEIIs are available for postdoctoral researchers of exceptional promise to undertake research in Australia of national and international significance. Historically QEII Fellowships have been awarded to the most outstanding researchers. ARFs and QEIIs are available for researchers with up to eight years of research experience since the award of their PhD. If a candidate has previously held an ARF or a QEII then this time limit increases to 13 years from PhD. Key features of ARFs and QEIIs are outlined in Table 2.

Over the past nine years the number of ARF/QEII proposals submitted and funded has gradually increased. In the past five years the success rate has averaged 15.5 per cent. Further details are at **Attachment C**.

Australian Professorial Fellowships (APFs)

APFs are available for outstanding researchers with proven international reputations to undertake research that is of major importance in its field and of significant benefit to Australia. There are no time limits with regard to the award of the candidate's PhD. Key features of APFs are shown in Table 2.

Over the past nine years the number of APF proposals submitted remained relatively constant. In the past five years the success rate has averaged 14.6 per cent. Further details are at **Attachment C**.

Table 2: *Discovery Projects* Fellowships, key characteristics

	Australian Postdoctoral Fellowships	**Australian Research Fellowships / Queen Elizabeth II Fellowships**	**Australian Professorial Fellowships**
Stage	Early-career	Mid-career	Established
Duration	3 or 4 years	5 years	5 years
Eligibility	≤3 years since award of PhD	First award: ≤8 years since award of PhD Second award: ≤13 years since award of PhD	No restriction
Funding options	100% salary and on-costs from the ARC for 3 years 75% salary and pro-rata on-costs from the ARC for 4 years	100% salary plus on-costs (for first-time awardees only) 50 % salary and pro-rata on-costs (for first or subsequent fellowships)	100% salary plus on-costs 50% salary plus pro-rata on-costs
Salary[1]	$81,846	ARF: $102,654 QEII: $122,076	Step 1: $141,496 Step 2: $163,692
Number funded each year	Approximately 110	Approximately 30 at 100% salary option or up to 60 at 50% salary option	Approximately 15 at 100% salary option or up to 30 at 50% salary option
Other funding	Projects costs available through *Discovery Projects* scheme	Projects costs available through *Discovery Projects* scheme	Projects costs available through *Discovery Projects* scheme
Administering organisations	Higher education organisations; AIATSIS; museums and herbaria; and Commonwealth or State funded research organisations (e.g. AIMS, ANSTO, CSIRO, DSTO, etc)	Higher education organisations; AIATSIS; museums and herbaria; and Commonwealth or State funded research organisations (for QEII Fellowships only)	Higher education organisations; AIATSIS; museums and herbaria
Selection criteria	Investigator (40%) Proposed project content (60%) comprising: - Significance and innovation (30%) - Approach (20%) - National benefit (10%)	Investigator (40%) Proposed project content (60%) comprising: - Significance and innovation (30%) - Approach (20%) - National benefit (10%)	Investigator (40%) Proposed project content (60%) comprising: - Significance and innovation (30%) - Approach (20%) - National benefit (10%)

[1] 2010 figures, including 28% on-costs

2.5 Other Discovery Program Fellowships

Future Fellowships

In 2008, the Australian Government announced the creation of a new scheme, *Future Fellowships*, to promote research in areas of critical national importance by giving outstanding researchers incentives to conduct their research in Australia. The aim of *Future Fellowships* is to attract and retain the best and brightest mid-career researchers.

Over a five-year period (2009 -2013), *Future Fellowships* will offer fellowships to 1000 outstanding Australian and international researchers in the middle of their career. There are three steps in this scheme: their number, distribution and success rates are included in Table 4 below. Key features of *Future Fellowships* are outlined in Table 3.

To date, only one selection round has been completed and approved by the Minister under the *Future Fellowships* scheme. The second round is timetabled for approval in late 2010. The number of fellowship requests received and funded under the first round are summarised in Table 4.

Australian Laureate Fellowships

The *Australian Laureate Fellowships* scheme was introduced in 2008 (for funding commencing in 2009) to replace the *Federation Fellowships* scheme. *Australian Laureate Fellowships* are available for outstanding researchers of international repute.

The *Australian Laureate Fellowships* scheme reflects the Australian Government's commitment to support excellence in research by attracting world-class researchers and research leaders to key positions, and creating new rewards and incentives for the application of their talents in Australia. Preference is given to researchers who will play a significant, sustained leadership and mentoring role in building Australia's internationally competitive research capacity. Key features of the Australian Laureate Fellowships are outlined in Table 3.

To date, two selection rounds have been completed under the *Australian Laureate Fellowships* scheme. The number of proposals and fellowship requests received and funded under those rounds are summarised in Table 4.

It is also important to note that while 25 *Federation Fellowships* were available each year, there was no restriction on applicants seeking a second Federation Fellowship. As a result, in the period 2006-2008, 15 *Federation Fellowships* were awarded to existing Federation Fellows. Under the *Australian Laureate Fellowships* scheme, Fellowship recipients cannot apply for or be awarded a second Fellowship and over time this will create more opportunities.

Table 3: Other Discovery Fellowships, key characteristics

	Future Fellowships	**Australian Laureate Fellowships**
Stage	Mid-career	Established (mid to late career)
Eligibility	Between 5 and 15 years research experience since completion of PhD including: Step 1: between 5 and 9 years Step 2: between 7 and 11 years Step 3: between 10 and 15 years	No restrictions
Duration	4 years	5 years
Salary	Step 1: $126,638 Step 2: $153,298 Step 3: $179,958 100% salary and on-costs from the ARC for 4 years Part-time salary and pro-rata on-costs from the ARC for a period of up to 6 years	$133,302 salary supplement
Other funding	Each Administering Organisation will receive funding of $50,000 per year to support research infrastructure, equipment, travel and relocation costs.	Project funding of up to $300,000 per annum Funding for up to 2 postdoctoral researchers for 5 years ($81,846 for PDRAs) Funding for up to 2 postgraduate researchers for 4 years ($27,222 for PGR)
Administering Organisations	Higher education institutions Commonwealth or State funded research organisations and some medical research institutes	Higher education institutions Commonwealth or State funded research organisations
Selection criteria	Investigator (40%); Project quality (25%); Strategic alignment/Collaboration/National Research Priority (35%)	Investigator (40%); Program/Project of research activity (30%); Mentoring/Capacity building (30%)
Other	Applicants may not submit more than 2 proposals in funding rounds between 2009 and 2013	Successful Australian Laureate Fellows cannot apply for a second Australian Laureate Fellowship

Table 4: Other Discovery Fellowships, 2009 and 2010

	2009	2010
Future Fellowships		
Submitted	Step 1: 392 Step 2: 374 Step 3: 209 Total: 975	n/a
Funded	Step 1: 107 Step 2: 65 Step 3: 28 Total: 200	n/a
Success rates	Step 1: 27.3% Step 2: 17.4% Step 3: 13.4% Total: 20.5%	n/a
Australian Laureate Fellowships		
Submitted	148	97
Funded	15	15
Success rates	10.1%	15.5%

3. Issues arising from current arrangements

3.1 Early-career researchers and gender

Early Career Researchers

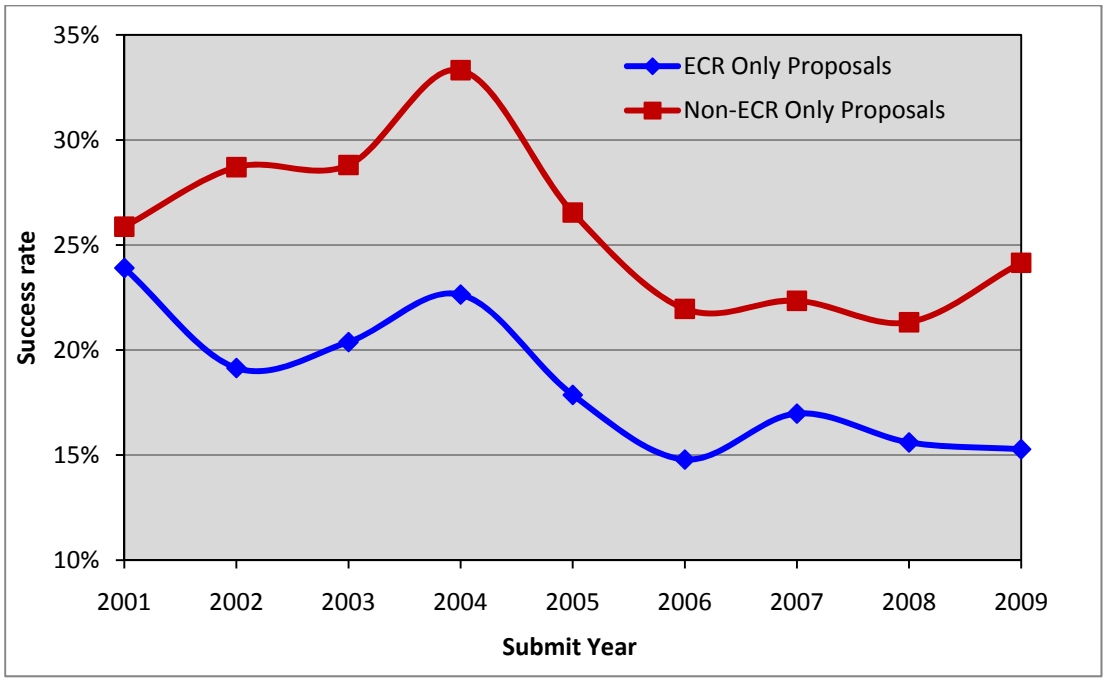
As indicated in Section 2.3, under the *Discovery Projects* scheme, researchers are able to identify themselves (self-nominated) as being ECRs (that is, researchers awarded their PhD within five years of the closing date for proposals). When all participants on a project are self-selected as ECRs then the proposal is classified as an ECR-only proposal.

In addition to APD fellowships the ARC supports ECRs in the following ways:

- the ARC aims to award up to 15 per cent of the first-year budget to ECR-only proposals. In targeting a specific proportion of funding to support ECR-only proposals under the *Discovery Projects* scheme, the aim is to encourage researchers who might not be competitive, due to track record, to apply. When this mechanism was first introduced in 2001, the ARC had received additional funding under *Backing Australia's Ability* (BAA). The number of proposals for funding had increased and there was an expectation that the target funding for ECRs would be easily met
- assessors are asked to assess research track record relative to opportunity. Research track record was recently redefined as Research Opportunity and Performance Evidence (ROPE) to further encourage assessors to calculate the opportunity that a researcher has had to build a track record
- a limit is in place to restrict the number of *Discovery Projects* proposals a researcher can hold.

Despite these factors the success rate for ECR-only proposals over time has been significantly lower than non-ECR only proposals (proposals that either have a mix of ECRs and senior researchers or have no ECRs involved). The overall success rate for ECR-only proposals over the nine year period has been 18.4 per cent compared to non ECR-only proposals with a success rate of 25.5 per cent, a difference of 7.1 percentage points (Figure 1).

Figure 1: Success rates for ECR-only proposals and non ECR-only proposals from submit year 2001 to 2009



ECR-embedded proposals fare considerably better than ECR-only proposals and the success rate of these proposals has remained similar to the overall success rate for *Discovery Projects* over the nine year period (Table 1). However, ECR-embedded proposals are unevenly spread across discipline panels and this may inhibit the growth of research innovation by younger researchers in some disciplinary panels. See data in **Attachment D**.

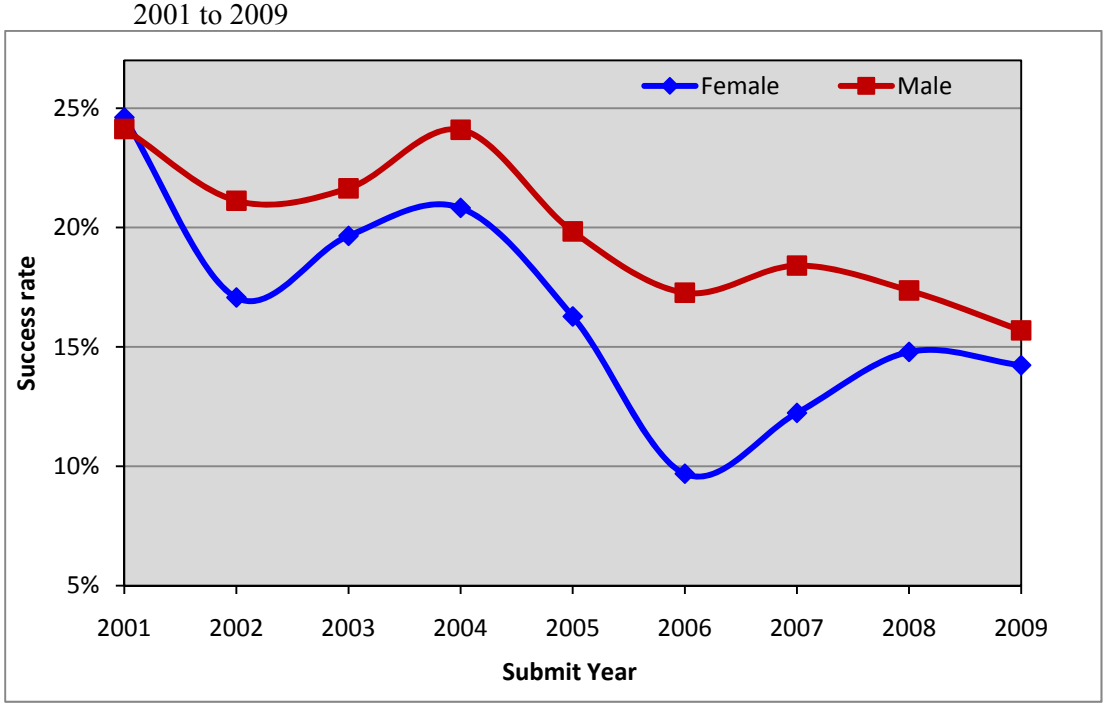
One of the explanations for the lower success rate of ECR-only proposals might be the uniform selection criteria for all projects and fellowships in an omnibus scheme. When introduced nearly a decade ago, concern was expressed about using the same selection criteria, with the inevitable focus on track record, to evaluate both new researchers and mid to late career researchers. Trying to use a financial quota of 15 per cent funding of ECR-only proposals has not been an effective device to remedy this problem.

Because of the discrepant success rates between ECR-only proposals and ECR-embedded proposals there has been a change in ECRs applying on each type of proposal. In 2001 60 per cent of all ECRs applied on ECR-only proposals and 40 per cent on ECR-embedded proposals. By 2009 these proportions had reversed, whereby 60 per cent of all ECRs applied on ECR-embedded proposals and 40 per cent on ECR-only proposals. Researchers have noted the potential disadvantage of an ECR-only proposal.

Gender

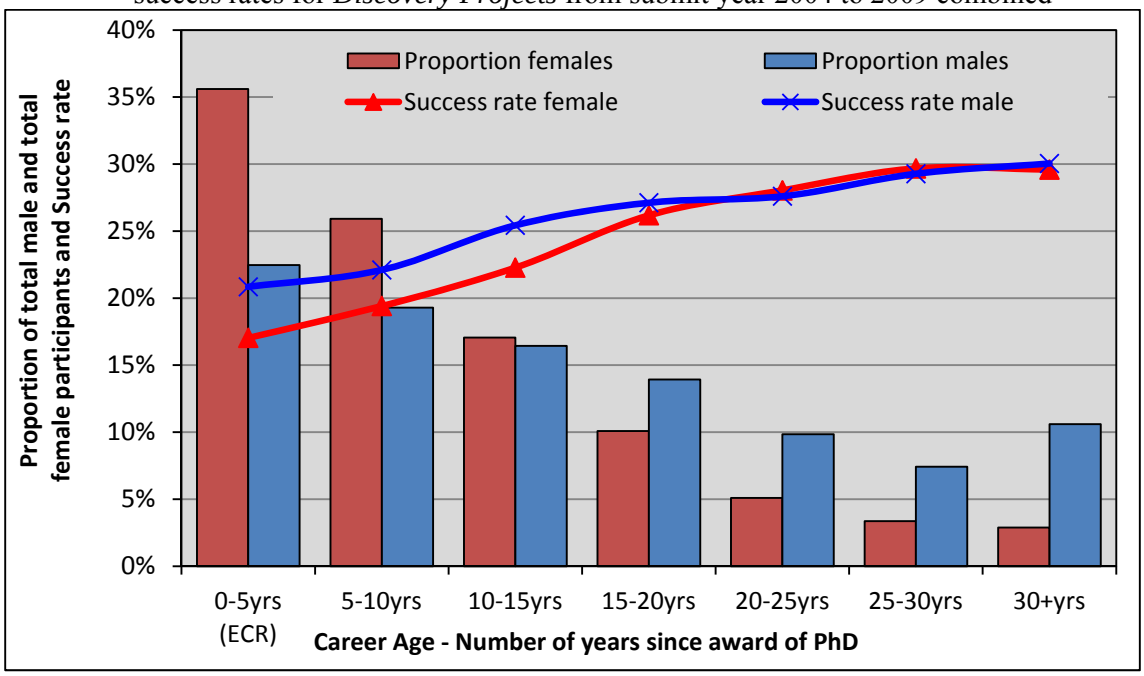
ECRs in *Discovery Projects*, particularly on ECR-only proposals, have been less successful than more established researchers, a major cause for concern. Of further concern has been the trend that female researchers within the ECR cohort have been significantly less successful than male ECRs, and significantly less successful than male researchers overall. The participant success rate for females on ECR-only proposals over the nine year period is 16.5 per cent compared to males at 19.9 per cent, a difference of 3.4 percentage points (Figure 2). The overall participant success rate in *Discovery Projects* for the nine year period is 25.8 per cent, which is 9.3 percentage points higher than females on ECR-only proposals.

Figure 2: Participant success rate for males and females on ECR-only proposals from submit year 2001 to 2009



The relative performance of female ECRs could contribute to another trend that has been observed in *Discovery Projects*. Female participation at the ECR stage is very high but the retention rate of female researchers as they move through their career is worryingly low. Between 2004 and 2009 female ECRs (0-5 years from PhD) made up 35.6 per cent of all the females considered in *Discovery Projects*. Females with 25 or more years of research experience accounted for only 6.3 per cent of the total. This trend is very different to male researchers with the ECRs accounting for 22.5 per cent and those with 25 or more years of research experience accounting for 18.0 per cent of the total. Although retention rates for female researchers is generally poor, for those that remain in a research career, success rates improve until a point 15 years from PhD and from then on females achieve very similar levels of success as males. At this point however the total number of female researchers is small. These trends are displayed in Figure 3.

Figure 3: The proportion of total females and total males by career age and the corresponding success rates for *Discovery Projects* from submit year 2004 to 2009 combined



It should be noted that this age and gender bias against ECRs in *Discovery Projects* is the single most significant cause of the age and gender bias across all ARC funding schemes. No other single ARC funded scheme displays such a persistent, relatively constant and large gender difference. By addressing this issue in Discovery the aim is to remove gender difference across ARC schemes as a totality.

3.2 Overlap between schemes

There is considerable overlap in applications, assessment and funding support provided through fellowships under the *Discovery Projects* scheme and other individual fellowship schemes within the suite of Discovery funding. As a result of this growing overlap between schemes applicants increasingly apply to a number of schemes to maximise the chance of success.

In submit year 2008 for example:

- approximately 15 per cent of all APF applicants applied for a Future Fellowship
- approximately 30 per cent of ARF/QEII also applied for a Future Fellowship
- approximately 6 per cent of APFs applied for a Australian Laureate Fellowship.

Instances of overlap are provided in Tables 5 and 6. In the first round of *Future Fellowships* there were nine instances where a researcher was awarded both a *Discovery Projects* Fellowship and a Future Fellowship which in accordance with Funding Rules has required the relinquishment of one of the fellowships. Eight of these researchers relinquished the *Discovery Projects* Fellowship and one relinquished the Future Fellowship.

Table 5: Researchers requesting both Discovery Projects Fellowships and Future Fellowships in submit year 2008 for funding commencing in 2009

Discovery Projects Fellowship type	Future Fellowship Type	Instances of overlap
Australian Professorial Fellowship (APF)	Step 1	1
	Step 2	12
	Step 3	17
APF Total		**30**
Australian Research Fellowship (ARF) / Queen Elizabeth II Fellowship (QEII)	Step 1	67
	Step 2	15
	Step 3	1
ARF/QEII Total		**83**
Total instances of overlap		**113**

Table 6: Instances of overlap between Australian Professorial Fellowships (APFs) in *Discovery Projects* and *Australian Laureate Fellowships* in submit years 2008 and 2009.

Discovery Projects (APF) Submit Year	Australian Laureate Fellowships Submit Year	Instances of researchers applying for APFs and Laureates
2008	2008	7
	2009	5
2009	2008	16
	2009	7
Total instances of overlap		**35**

The overlap between fellowships creates duplicated effort for all involved, including researchers, research offices, assessors and the ARC:

- researchers understandably apply under a number of schemes to maximise the opportunity for success
- the increased number of applications impacts on assessors (Australian Based Readers, International Readers, the College of Experts and/or Selection Advisory Committees), who are required to read more applications and the ARC administrative teams who have to assign assessors and administer the assessment process
- ARC staff and research offices also have to deal with an increased amount of post-award activity when subsequent relinquishments occur (and the relinquished funds cannot always be utilised effectively).

3.3 Australian Professorial Fellowships (APFs)

Changes to the fellowships within *Discovery Projects*, APFs in particular, may appear to reduce the number, the length and flexibility of current arrangements. The number of fellowships as a whole across ARC schemes has grown significantly over the last three years, and the new fellowships we propose within the Discovery Program will not lead to any significant reduction in overall numbers. The issue of flexibility, including the 50/50 option, and the provision of fellowships of up to five years has created considerable financial and organisational strains within many university departments/schools.

- The pre-eminent position of the APFs for those with strong research-only track records has been superseded by *Federation Fellowships* and more recently *Australian Laureate Fellowships*.
- The foreshadowed changes to the number of Step 2 and Step 3 *Future Fellowships* will increase options for competitive professorial researchers.
- An increasing number of APFs have requested the 50/50 funding option and this has put financial strains on many administering organisations.
- Many APFs have been precluded from undergraduate teaching and sometimes reduced supervision to meet their fellowship commitments. This contrasts with other fellowships, especially *Australian Laureate Fellowships* where mentoring is required.
- Institutions report difficulties reintegrating APFs (especially when awarded to teaching and research academics) back into academic responsibilities after five years absence.
- By superseding APFs and other fellowships in *Discovery Projects* and shortening the period of award to three years, we are able to offer more awards.
- University workload models and funding models have supported research-only staff; thus the barriers for movements between the research-only and the teaching and research positions have been reduced. Revising the APF is consistent with changing university staff needs.

3.4 Assessment

The incorporation of the three distinct fellowships within *Discovery Projects* has also led to complexities in terms of assessment. Assessors have to consider the quality of the fellowship application as well as the project. This can become complicated particularly when the fellowship candidate is strong but the project uncompetitive or vice versa.

There is also the difficulty of assessing the research track record of researchers with very different levels of experience. Even with ROPE in place comparing the track record of a researcher one year out from their PhD with a Professor with 25 years of research experience is very challenging. This complexity is compounded in the scoring and ranking of ECRs.

4. Proposed changes

4.1 Overview

Under the changes proposed:

- a new, separately assessed, flexible award will be established to support ECRs
- support for the named fellowships and ECR-only proposals currently available under the *Discovery Projects* scheme will be removed
- a new award will be made available under the *Discovery Projects* scheme to support mid to late career research-only and teaching and research academics to undertake a specific project or program.

Under the changed arrangements:

- ECRs will still be able to apply to the *Discovery Projects* scheme but their status as ECRs will no longer be recognised and there will be no budget set aside for their specific support.
- ECRs will not be able to hold a *Discovery Projects* grant as a sole CI and be a recipient of a grant under the new ECR award scheme in parallel.
- Research Opportunity and Performance Evidence (ROPE) will continue in *Discovery Projects* for the purpose of assessing past research performance.
- Support for research fellowships will continue under the *Future Fellowships* and *Australian Laureate Fellowships* schemes.
- The distribution of *Future Fellowships* between the three funding levels (including a possible increase in the number of Step 2 and Step 3 Future Fellowships) may be adjusted to reduce potential overlap with the new ECR scheme, to provide an adequate number of mid and late career research fellowships, and to maintain quality.
- Fellowships in the *Discovery Projects* scheme and the new ECR award scheme will be restricted to three years full-time ARC funding.
- The ARC is attempting to lower the risk for Administering Organisations to recruit, train and develop careers for newly graduated researchers, rather than focus their efforts on low risk investments in mid to late career researchers.
- A focus on ECR support will assist the nation's research workforce planning.

4.2 A new ECR award in the Discovery Program

It is proposed that a new, separately assessed, flexible award be established to support ECRs. As demonstrated in Section 2 the *Discovery Projects* scheme does not support ECRs well, and in turn this impacts on gender success rates.

The aims of the new award are to improve the assessment and success rate of ECRs, improve gender equity at this stage of researchers' careers and attract more international researchers at this career stage. By separating ECRs from assessment of *Discovery Projects* the assessment will be simpler and more consistent, which in turn will help to attract and retain outstanding early-career researchers, national and international.

Establishment of a separate process for ECRs was supported in the feedback received from the Peer Review consultation conducted late last year. Support for this initiative also came from the Gender and ECR Workshop held at the ARC offices in June this year, the ARC Advisory Council and the ARC College of Experts. A number of overseas research agencies have separate schemes for ECRs.

Eligibility

It is proposed that the ECR award will be open to researchers who:

- are up to five years from award of PhD (with up to an additional two years for child-birth, carers responsibilities and career interruptions). Seven years from the award of PhD is proposed to be the absolute eligibility limit
- have not been named as the first-named investigator on a successful *Discovery Projects* proposal except where this was as an APD Fellowship recipient.

Funding support

Duration

Awards will be funded for three years full time or up to 6 years part-time.

Funding

Salary and project support will be provided:

- the salary support will be at the level of the current APD Fellowship (indexed each year)
- in addition to salary support, researchers will be able to apply for up to $25,000 of project funding per year.

Funding options

Flexible funding options will be provided, including:

- the award could be made on a part-time or full-time basis and could be changed from full-time to part-time to accommodate maternity leave and carer responsibilities
- if there was a career interruption (for example, maternity leave) during the award, then funds could be used to employ a research assistant so that the project continues and research momentum is maintained
- if desired the award could start as full-time research (in the first year) and then incorporate more teaching as the funding period continues. Funds could then be used to employ a research assistant to support the project
- Eligible Organisations will be expected to consider various and appropriate teaching and research, and research-only career pathways when supporting applications
- the ARC will be looking to Eligible Organisations to support applications in their areas of research and teaching and research strengths, where facilities, intellectual stimulation and career support are clearly evident.

Number awarded

Up to 200 ECR awards will be available each year.

Selection

- Institutional support and the mentoring environment will be important in the selection process.
- Assessment will be based on the following weightings: 50% for the Project; 20% for research record; and 30% for institutional commitment.
- Assessment will be conducted as a separate process to the assessment of the *Discovery Projects* scheme.
- The selection process will incorporate outcomes of the 2009 Peer Review consultation process progressively during 2011-12.

Issues for specific feedback

1. Is the definition of 'early-career' as researchers who have between 0 and 5 years research experience since the award of their PhD (or equivalent research qualification or experience) appropriate?
2. Will the proposed new ECR award meet the needs of ECRs?
3. How do we maximise international and national mobility in designing this scheme?
4. Is $25,000 per annum an appropriate amount for additional project support (noting if more was offered fewer awards could be funded)?
5. Are the selection criteria appropriate?
6. Should there be limitations on the number of times an applicant may apply?
7. Given that some of the current cohort of potential applicants for ARF/QEII Fellowships may apply to the new ECR award but those seeking a second ARF/QEII Fellowship will need to apply to the *Future Fellowships* scheme, should the current restrictions on ARF/QEIIs applying for *Future Fellowships* be relaxed?
8. Are the proposed flexible arrangements adequate?

Issues for general feedback

The ARC also welcomes feedback on any other aspect of proposed new arrangements to support early-career researchers.

4.3 A targeted and simplified *Discovery Projects* scheme

It is proposed that the *Discovery Projects* scheme be refocused. There will be greater emphasis on the assessment of the research proposal. There will be greater flexibility around Chief Investigators with regard to requests for teaching relief. The removal of the current named fellowships will lead to a simplified eligibility process.

Eligibility

Under the changes proposed:

- *Discovery Projects* will be open to researchers at all stages of their career with no special support for ECRs
- there will be revised application processes to reduce complexity, remove current restrictions on teaching relief and enable research-based creative practice proposals to be eligible
- the issue of CI eligibility in *Discovery Projects*, especially with regard to part time and fractional appointments will be revised
- the funding period for all *Discovery Projects* and awards will be restricted to three years full time ARC funding; institutions may wish to extend support for a further two years, or grants may be extended over a five year period at a fractional rate.

Funding support

Under the changes proposed support will be available for:

- project costs
- awards targeted at mid to late career, research-only and teaching and research academics, based on the needs of the project in addition to the excellence of the researcher
- awards will be for two to three years and up to 70 will be awarded each year
- International Collaboration Awards (ICAs) will remain.

Selection criteria

Under the changes proposed:

- the current broad selection criteria will remain; however, we would welcome feedback on the relative weightings of these criteria
- the selection process will incorporate outcomes of the 2009 Peer Review consultation process progressively during 2011-12.

4.4 Implementation plan

The ARC proposes to implement the changes to the *Discovery Projects* scheme in time for the 2011 round for funding commencing in January 2012. The ARC proposes to establish the new ECR award scheme in early 2011 for funding commencing in January 2012.

Issues for specific feedback

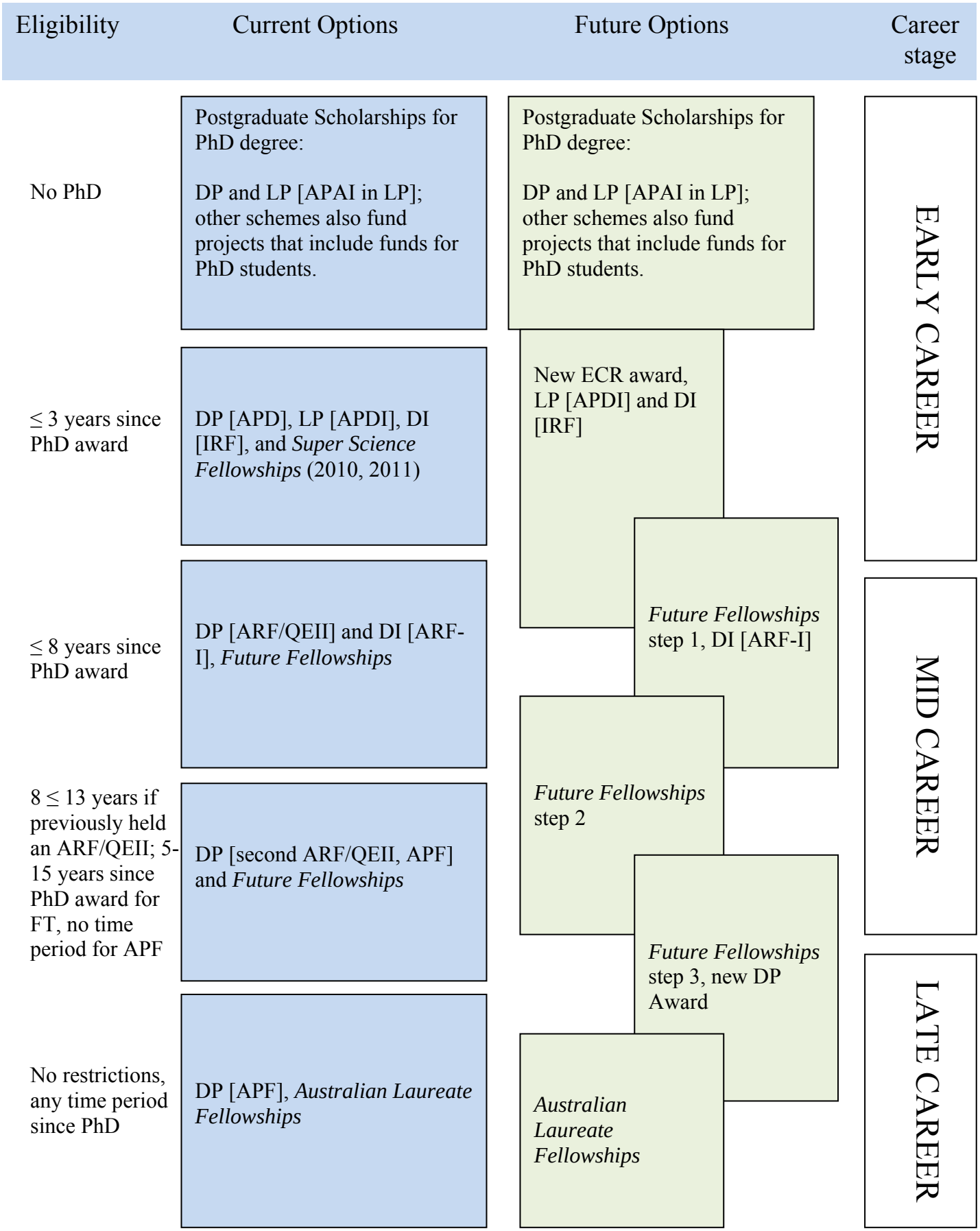
1. Are the weightings of the selection criteria appropriate?
2. How might we simplify the application process further?
3. Are there any issues about eligibility we should address?
4. Is the rejoinder process useful?
5. Do you have comments on the current eligibility criteria for *Discovery Projects* CIs, in particular, and the provisions for researchers holding 50% appointments at Eligible Organisations?
6. How might we improve feedback to unsuccessful applicants?

Issues for general feedback

The ARC also welcomes feedback on any other aspect of proposed new arrangements for the *Discovery Projects* scheme.

ATTACHMENT A

Diagrammatic representation of ARC fellowship opportunities



APAI	Australian Postgraduate Award (Industry)
APD	Australian Postdoctoral Fellowship
APDI	Australian Postdoctoral Fellowship (Industry)
APF	Australian Professorial Fellowship
ARF	Australian Research Fellowship
ARF-I	Australian Research Fellowship - Indigenous
DP	*Discovery Projects* scheme
DI	*Discovery Indigenous Researchers Development* scheme
IRF	Indigenous Researcher Fellowship
LP	*Linkage Projects* scheme
QEII	Queen Elizabeth II Fellowship

Discovery Projects Trend Data

Chart 1: Number of Proposals considered and funded and the corresponding success rates in *Discovery Projects* for submit years 2001 to 2009

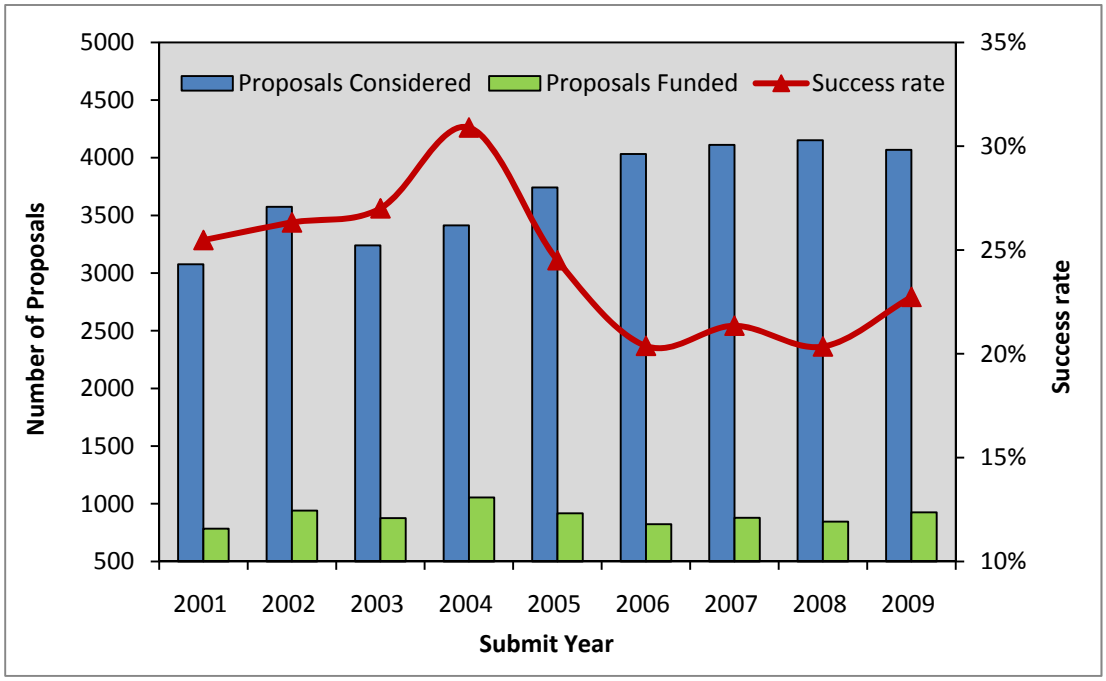


Chart 2: Number of APD Fellowships requested and funded and the corresponding success rates for submit years 2001 to 2009

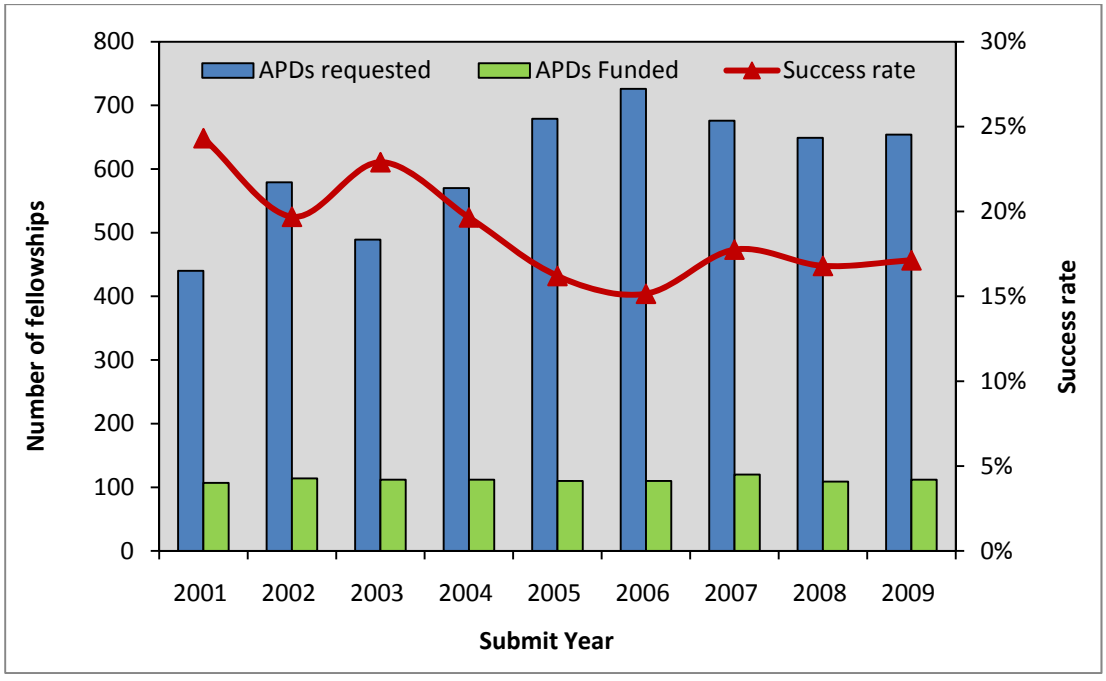


Chart 3: Number of ARF/QEII Fellowships requested and funded and the corresponding success rates for submit years 2001 to 2009

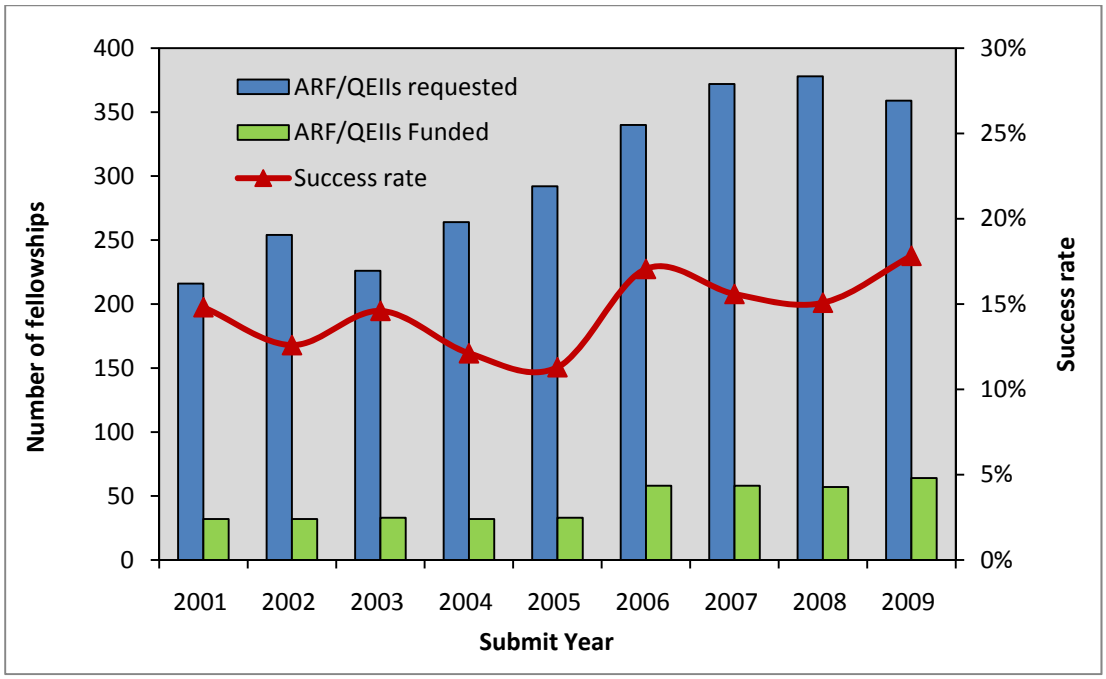
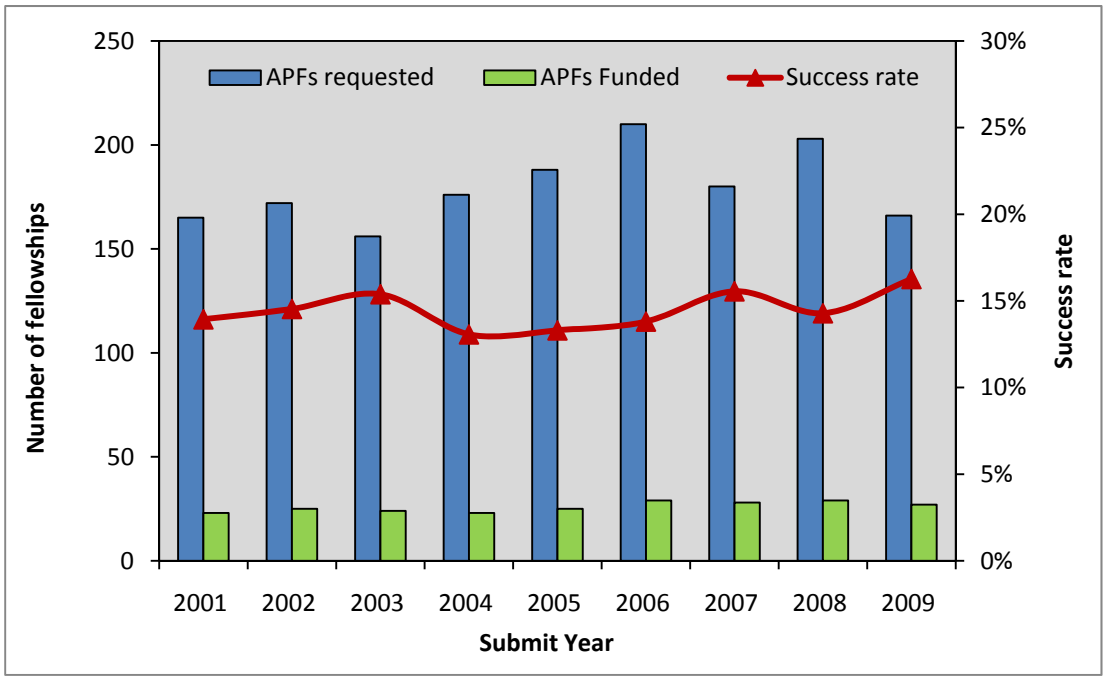


Chart 4: Number of APF Fellowships requested and funded and the corresponding success rates for submit years 2001 to 2009



ATTACHMENT C

Additional Fellowships data

Table 1 APD trends by gender

Submit Year	APD					
	Female			Male		
	Requested	Funded	Success rate	Requested	Funded	Success rate
2001	169	43	25.4%	271	64	23.6%
2002	233	47	20.2%	346	67	19.4%
2003	197	45	22.8%	292	67	22.9%
2004	234	39	16.7%	336	73	21.7%
2005	260	33	12.7%	419	77	18.4%
2006	301	30	10.0%	425	80	18.8%
2007	270	46	17.0%	406	74	18.2%
2008	259	41	15.8%	390	68	17.4%
2009	263	48	18.3%	391	64	16.4%
Total	**2186**	**372**	**17.0%**	**3276**	**634**	**19.4%**

Table 2 ARF/QEII trends by gender

Submit Year	ARF/QEII					
	Female			Male		
	Requested	Funded	Success rate	Requested	Funded	Success rate
2001	71	11	15.5%	145	21	14.5%
2002	66	10	15.2%	188	22	11.7%
2003	66	8	12.1%	160	25	15.6%
2004	76	8	10.5%	188	24	12.8%
2005	74	6	8.1%	218	27	12.4%
2006	97	14	14.4%	243	44	18.1%
2007	110	16	14.5%	262	42	16.0%
2008	99	15	15.2%	279	42	15.1%
2009	93	20	21.5%	266	44	16.5%
Total	**752**	**108**	**14.4%**	**1949**	**291**	**14.9%**

Table 3: APF trends by gender

Submit Year	APF					
	Female			Male		
	Requested	Funded	Success rate	Requested	Funded	Success rate
2001	22	1	4.5%	143	22	15.4%
2002	17	2	11.8%	155	23	14.8%
2003	24	5	20.8%	132	19	14.4%
2004	22	1	4.5%	154	22	14.3%
2005	30	4	13.3%	158	21	13.3%
2006	36	6	16.7%	174	23	13.2%
2007	23	3	13.0%	157	25	15.9%
2008	27	2	7.4%	176	27	15.3%
2009	22	3	13.6%	144	24	16.7%
Total	**223**	**27**	**12.1%**	**1393**	**206**	**14.8%**

Table 4: Average age of successful Fellowship candidates by gender

Submit Year	APD		ARF/QEII		APF	
	Female	Male	Female	Male	Female	Male
2001	34.2	33.2	36.6	37.0	62.2	48.6
2002	35.5	33.2	37.2	36.2	41.9	47.0
2003	37.1	33.4	37.9	36.6	49.6	47.8
2004	34.0	33.3	34.6	36.4	49.8	51.5
2005	35.7	31.8	37.9	37.1	59.6	48.7
2006	35.8	33.4	40.6	36.4	53.2	49.1
2007	34.9	31.8	43.0	36.9	54.7	51.8
2008	34.5	32.5	36.7	35.8	45.2	51.6
2009	35.6	32.6	40.4	36.3	56.2	52.8
Overall Average	**35.3**	**32.8**	**38.8**	**36.5**	**52.8**	**50.0**

Table 5 Future Fellowships success rates by salary level and gender

Fellowship type	Gender	Commencing in 2009			
		No. of proposals	**% of proposals considered**	**No. of approved Fellows**	**Success Rates**
Salary Level 1 @ $95,000	Female	131	13.44%	36	27.48%
	Male	261	26.77%	71	27.20%
	Salary Level 1 Total	**392**	**40.21%**	**107**	**27.30%**
Salary Level 2 @ $115,000	Female	107	10.97%	17	15.89%
	Male	267	27.38%	48	17.98%
	Salary Level 2 Total	**374**	**38.36%**	**65**	**17.38%**
Salary Level 3 @ $135,000	Female	45	4.62%	6	13.33%
	Male	164	16.82%	22	13.41%
	Salary Level 3 Total	**209**	**21.44%**	**28**	**13.40%**
All levels	Female	283	29.03%	59	20.85%
	Male	692	70.97%	141	20.38%
Total		**975**	**100%**	**200**	**20.51%**

Additional ECR and gender data

Table 1: Number of ECR-embedded proposals in *Discovery Projects* by discipline panel from submit years 2001 to 2009

Panel	2001	2002	2003	2004	2005	2006	2007	2008	2009
BSB	81	88	88	109	109	124	139	162	133
EE	61	78	78	89	111	117	121	120	112
HCA	47	45	45	46	73	87	111	113	116
MIC	58	76	72	93	108	117	134	132	170
PE	72	73	48	101	109	109	137	127	128
SBE	104	131	114	147	162	187	215	226	224
Total	**423**	**491**	**445**	**585**	**672**	**741**	**857**	**880**	**883**

Table 2: Gender success rates in Discovery Projects by the ECR balance of the proposal for submit years 2005 to 2009