



# ARC CENTRES OF EXCELLENCE

## Funding Rules

for funding commencing in

2003

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## **1. Introduction**

The Commonwealth Government's Innovation Action Plan *Backing Australia's Ability* will double the funding for the Australian Research Council's (ARC) *National Competitive Grants Program* over the five-year period 2002-6. The plan announced an emphasis on research areas in which Australia enjoys, or wants to build, a competitive advantage. The Government has designated four Priority Areas of Research in which this emphasis is to be placed. They are Nano-Materials and Bio-Materials, Genome/Phenome Research, Complex/Intelligent Systems, and Photon Science and Technology. Descriptions of the Priority Areas are given in Appendix 1.

The ARC is establishing Centres of Excellence to create the scale and focus necessary to maintain and develop Australia's international standing in the designated Priority Areas. Through highly innovative research that addresses challenging and significant problems within the priority areas, Centres will build national research capability and produce outcomes of economic, social and cultural benefit to Australia.

## **2. Objectives**

The objectives of the ARC Centres of Excellence program are to:

- a) undertake highly innovative research at the forefront of developments within the designated Priority Areas, with a scale and a focus leading to outstanding international and national recognition;
- b) promote research that will enhance Australia's future economic, social and cultural wellbeing;
- c) link existing Australian research strengths and build new capacity for interdisciplinary, collaborative approaches to address the most challenging and significant research problems;
- d) build Australia's human capacity in the Priority Areas by attracting, from within Australia and abroad, researchers of high international standing as well as the most promising research students;
- e) provide high quality postgraduate and postdoctoral training environments for the next generation of researchers in the Priority Areas;
- f) offer Australian researchers access to world class infrastructure and equipment, and to key research technologies;
- g) develop relationships and build new networks with major international centres and research programs that help achieve global competitiveness and recognition for Australian research;
- h) establish Centres of such repute in the wider community that they will serve as points of interaction among higher education institutions, Governments, industry and the private sector generally; and
- i) raise awareness of the designated Priority Areas in Australia, particularly their importance in innovation and international competitiveness.

### 3. Description - Characteristics of Centres

#### 3.1. Focus on Research and Research Training

ARC Centres of Excellence will be established on the basis of the excellence of the proposed research program, the excellence of the participating researchers, and the potential of both to contribute to the economic, social and cultural development of Australia. Centres' research portfolios will build on Australia's existing strengths and develop additional capacity to generate new knowledge. Centres will focus research within one or more of the designated priority areas, and will address challenging and significant problems whose resolution will lead to international acclaim and offer benefits to potential end-users. They will use strategic networking and linkages to build the critical mass required to make a real difference in the focal areas of the research program. The ARC encourages Centres to develop and fund appropriate collaborative projects with the Social Sciences and Humanities, since these disciplines have much to offer in assisting Centres to capture the economic, social and cultural benefits of research in the priority areas.

Centres will provide a world-class research environment that is attractive to leading researchers and effective in developing the careers of Australia's best young researchers and research leaders. The education and outreach programs of Centres will build understanding of, and expertise in, the priority areas at regional and national level.

#### 3.2. Developing and Applying Research Outcomes

Centres are likely to make discoveries that have the potential for development to the point of commercial application. The ARC aims to help ensure that the value of such potential applications is captured for the national benefit. Accordingly, Centres will foster amongst their staff an awareness of sound innovation and commercialisation practice, and encourage entrepreneurial activity in appropriate circumstances. The international connections of Centres will assist the inflow of information regarding important advances in research and commercialisation of interest to Australia.

To maximise the national benefit from its research, Centres must comply with the *National Principles of Intellectual Property Management for Publicly Funded Research* ([http://www.arc.gov.au/publications/arc\\_pubs/01\\_01.pdf](http://www.arc.gov.au/publications/arc_pubs/01_01.pdf)) and with the intellectual property statutes of the Collaborating Organisations.

#### 3.3. Areas of Investigation Not Supported

The ARC does not support research in the fields of clinical medicine and dentistry. The National Health and Medical Research Council (NHMRC) has responsibility for funding research in those areas.

The ARC funds experimental and theoretical research undertaken to acquire new knowledge, as well as original research seeking to address problems that arise in specific applications. The ARC does not fund investigations that are more appropriately undertaken by way of consultancy, although researchers associated with Centres may undertake consultancies.

While encouraging the commercialisation of the outcomes of research it funds, the ARC does not fund directly the development of products or other commercialisation activities.

### 3.4. Financial Assistance

Approximately eight Centres will be established, with ARC funding of the order of \$2,000,000 each per year. The funding will be offered for a period of five years.

Funding for a Centre will be directed through an eligible administering higher education institution (listed at Appendix 2). The ARC's financial assistance to a Centre is subject to the appropriation of moneys and the approval of expenditures under the *Australian Research Council Act 2001* (the Act). Approval of expenditures under the Act can be considered only in relation to years for which there are relevant appropriations. The ARC will enter into a Funding Contract with the administering institution that will specify *inter alia* the approved and indicative expenditures over the funding period.

Subject to exceptional performance by a Centre and to the availability of funding, the ARC may consider making a recommendation for financial assistance for an additional period of up to five years beyond 2007.

Centres may involve researchers from Commonwealth or State agencies funded primarily for research (such as Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australian Institute for Marine Science (AIMS), Australian Nuclear Science and Technology Organisation (ANSTO)), and from overseas organisations, but these researchers are not eligible to receive ARC financial assistance. Centres will have a prominent identity and physical presence at all nodes, as well as high visibility on the World Wide Web, and will be required to acknowledge the ARC's support in appropriate ways.

The ARC will provide funding assistance for the eligible direct costs of a Centre research program. Direct costs include expenditure of salaries (and on-costs) of people who perform research or activities that support the research, stipends for research students, items of equipment used in the research and the costs of travel, visitors and meetings related to the research. Organisations involved in the establishment and ongoing support of a Centre will have a strategic intent to establish scale and focus in the selected priority area. Consequently, they are expected to meet all indirect costs, and to provide additional cash or in-kind resources. Indirect costs will include payments for appropriate office accommodation, libraries, laboratories, and equipment and other organisational overheads and infrastructure costs paid by the Collaborating Organisations. ARC financial assistance may not be used to pay full or partial salaries or salary loadings for the Director or for researchers who have continuing positions with the Collaborating Organisations.

Prospective applicants are encouraged to maximise the impact of ARC funding by obtaining commitments for additional financial contributions from State governments, venture capital firms, business investors, and similar bodies. Australian and international industry partners and business investors may provide in-kind resources to a Centre, and will be expected also to make cash contributions. A Centre may undertake individual research projects with organisations that are not founding Collaborating Organisations in the Centre provided that arrangements are made to protect the rights of all parties concerned.

### 3.5. Appointment and Responsibilities of the Director

A Director will be appointed to lead the Centre. The Director and the principal researchers in the Centre will be placed in a unique position to develop and carry through an excellent program of research, attracting outstanding researchers from within Australia and from overseas.

The Director, in consultation with the Advisory Board, will be responsible for implementing the strategies of the Centre and managing the research program. The Director will coordinate the research effort and reporting structures across all organisations and nodes involved in the Centre. The Director will also be responsible, in consultation with the Advisory Board, for managing the Centre's intellectual property in accordance with the policies of the collaborating institutions. The Director will work exclusively on the activities of the Centre and may not hold an ARC Fellowship or Federation Fellowship.

It is expected that proposals for a Centre will have been generated under the leadership of an Interim Director who will normally be the first-named Chief Investigator in the application. For some Centres, the Director's role may be primarily one of research management and coordination, and the Director's track record will be judged accordingly. In most cases, the Interim Director will become the Centre Director if the application is successful. Should the Interim Director not become the Director, or should the Director's position fall vacant, the ARC must be consulted before the appointment of the new Director. A Centre Director may be appointed only with the approval of the ARC.

### 3.6. Governance

Normally, a Centre's administrative operations will be established within the academic, administrative and financial governance structures of the administering institution, although the ARC may approve the establishment of a separate legal entity if this is appropriate. A Centre may be located at a single site, or comprise networked nodes, or operate as a "virtual Centre", or adopt any other approach to research management, provided that it meets the objectives and selection criteria.

Governance arrangements for a Centre should ensure fair access to resources for all eligible participants, make provision for entry and exit of Collaborating Organisations, and provide sound management of background and developed intellectual property. The ARC requires that understandings reached between Collaborating Organisations for the operation of a Centre be formalised by written agreement, and may request copies or other evidence of such agreements.

All Centres will have an Advisory Board that provides broad representation from the research and end-user communities. Within the governance structures of the administering institution, the Board will offer advice to the Director and the Collaborating Organisations regarding the scientific focus of the Centre, its structure and general operating principles, and intellectual property and commercialisation management.

### 3.7. ARC Centre Fellowships and Awards

Postdoctoral researchers employed using the ARC funding assistance to the Centre will be critical to achieving the intended research outcomes. The ARC will acknowledge the most outstanding of these postdoctoral researchers through the award of prestigious *ARC Centre Fellowships (ACFs)*. ACFs will be awarded after Centres have commenced operation. Centre Directors will be advised of a process to submit nominations of selected members of the research-only staff funded from the Centres' ARC funding assistance, for consideration and possible endorsement by the ARC as ACFs. The ARC will assess nominations against the criteria and standards of the ARC's existing Fellowship programs.

Centres will have flexibility in the salaries offered to ARC Centre Fellows, based on the minimum levels of the ARC notional salary rates for Fellowships (Appendix 1 of the *Discovery – Projects Guidelines for applicants for funding commencing in 2003* at [www.arc.gov.au](http://www.arc.gov.au)). ARC funding for ACF salaries will be paid from the ARC Centre budget.

Holders of ARC Postdoctoral Fellowships, ARC Research or QE II Fellowships, or ARC Professorial Fellowships are not eligible to hold ARC Centre Fellowships, but are eligible to be associated as researchers with the Centres.

In recognition of the importance of building Australia's human capacity through postgraduate training in the priority areas, Centres will be able to offer *ARC Centre Postgraduate Awards (APA-Cs)*. Centres will advise the ARC of APA-C recipients. Centres may set APA-C stipends at a level above the standard stipend for Australian Postgraduate Awards. ARC funding for APA-C stipends will be paid from the ARC Centre budget.

### 3.8. Associated Federation Fellowships

*ARC Federation Fellowships* are prestigious awards designed to provide internationally competitive salaries that will support and encourage outstanding Australian and international researchers to work in Australia. Federation Fellows with expertise in the designated research Priority Areas will play key roles in establishing the Australian research agenda in these areas and may be in a position to support and promote the work of Centres, mentor staff and students, and help build international links. A Federation Fellow may be an Executive Research Director or similar officer of a Centre.

The ARC foreshadows the inclusion of Priority Areas among the selection criteria for Federation Fellowships to commence in 2003. Applicants for Federation Fellowships in the Priority Areas will be invited to describe in their Fellowship application any proposed association with applications for ARC Centres of Excellence. A similar description *may* be included in an application for the associated Centres, in Part F3, but is not mandatory (to protect the confidentiality of Fellowship applicants). The descriptions will form part of the application material that is assessed.

Even when they are associated with Centres, Federation Fellows' salaries will be met from the Federation Fellowship program, not from ARC Centre funding. Federation Fellowship matching funding may *not* be offered from anticipated ARC Centre funding or from

resources put forward as a matching component in other applications for Commonwealth funding, including ARC Centres of Excellence.

## **4. Eligibility**

### **4.1. General**

Appendix 2 lists the higher education institutions eligible to administer a Centre grant.

Researchers will apply for a Centre through the administering institution. There are two distinct and mutually exclusive roles for applicants, determined primarily by the source of salary:

- Chief Investigators are people employed by an institution listed in Appendix 2, including ARC Fellows employed at those institutions. People who are not otherwise employed but who hold an honorary adjunct appointment at an institution listed in Appendix 2 may be a Chief Investigator; and
- Partner Investigators are people who are not eligible to be Chief Investigators in this program.

Applicants may be Chief Investigators or Partner Investigators on any number of applications for ARC Centres of Excellence.

The first-named Chief Investigator normally will be the Interim Director for the Centre and will be employed by the administering institution. The Centre Director must be a Chief Investigator, and is expected to work exclusively on the activities of the Centre. If a Director is unable to meet this undertaking, the application will not be considered.

Researchers employed by Australian research organisations outside the higher education sector that are funded primarily for research from State or Commonwealth Government sources are eligible to participate as Partner Investigators in ARC Centres of Excellence, but they are excluded from receiving ARC funds. Researchers employed by research organisations outside Australia are eligible to participate as Partner Investigators in ARC Centres of Excellence, but are excluded from receiving ARC funds. It is expected that researchers from overseas organisations will bring significant contributions to the work of the Centre.

Chief Investigators and Partner Investigators must have permission from their employer to participate in the Centre. The organisations employing the Chief and Partner Investigators are collectively designated as the Collaborating Organisations in the Centre.

Applications that can be more appropriately supported by other funding sources will not be considered.

### **4.2. Holders of Current ARC Grants**

Researchers are eligible to apply as Chief Investigators regardless of the kind or number of current ARC grants that they hold. They are required to reveal all associations with current ARC and other Commonwealth grants and grant applications.

The ARC does not duplicate funding assistance for research that has been already funded by the ARC or other bodies. Accordingly, Chief Investigators named on successful applications may either retain their current ARC grants, or will be required to relinquish them, according to the following rules:

*ARC Fellowships awarded prior to 2002, Federation Fellowships, and any Fellowship component(s) of a Discovery-Project or a Linkage-Project grant:*

These may be retained.

*ARC Special Research Centres, Key Centres of Teaching and Research, Large Project Grants, Strategic Partnerships with Industry - Research and Training (SPIRT) Scheme Grants (excluding the Fellowship funding defined above), Discovery-Project grants and Linkage-Project grants (excluding the Fellowship funding defined above) in areas that would be duplicated, or could reasonably be expected to be duplicated, within the research program of the Centre:*

Chief Investigators may not continue to hold such grants. Normally, grant holders will nominate to relinquish the grant, and the ARC will take into account the indicative funding for these grants when determining the level of funding offered to the Centre. In some cases, the ARC may permit at its discretion the current grant to be transferred to other co-Investigators who are not associated with the new Centre.

*ARC Special Research Centres, Key Centres of Teaching and Research, Large Project Grants, Strategic Partnerships with Industry - Research and Training (SPIRT) Scheme Grants, Discovery-Project grants and Linkage-Project grants in areas that would not be duplicated in the research program of the Centre:*

Chief Investigators may retain such grants. The potential impact on the Chief Investigators' time commitments to the Centre will be taken into account.

Researchers who are not Chief Investigators and who are, or who become, associated with the Centre may retain any current ARC grant. The ARC expects that the Progress and Final Reports submitted by researchers in this category will refer to the relationship between their grant project and the Centre's research program, and may take steps to terminate the grant if there is evidence of poor coordination and undesirable duplication.

### **4.3. Cross-Program and Cross-Scheme Eligibility**

The research program of the Centre will be carried out principally by researchers appointed or seconded to the Centre, or who have a formal association with the Centre.

Applicants should note the current eligibility criteria for access to other ARC funding schemes, as expressed in the Funding Rules for those schemes. The ARC reserves the right to change these criteria in future funding rounds. The ARC does not intend to count an ARC Centre of Excellence grant within the "two-grant rule" in the Discovery-Projects program, or the "four-grant rule" in the Linkage-Projects program. The ARC does intend to apply to researchers associated with ARC Centres of Excellence the "core research" eligibility test in future Discovery-Projects and Linkage-Projects programs.

The ARC will place no restriction on researchers associated with the Centre who wish to apply for research funding from sources other than those provided by the ARC.

## 5. How to Apply

The application process for ARC Centres of Excellence comprises two stages: (1) lodgement of an Expression of Intention to Apply (EOI); and (2) lodgement of a Full Application.

### 5.1. Expression of Intention to Apply (EOI)

The ARC encourages potential applicants to explore opportunities for collaboration and cooperation prior to the competitive selection process. To facilitate discussion and negotiation, the ARC requires potential applicants to provide an expression of their intention to submit a Full Application. Expressions of Intention to Apply will be prepared using the *pro forma* available on the ARC's website ([www.arc.gov.au](http://www.arc.gov.au)). The EOI will comprise four Parts.

Part A will include summary information that the ARC may publish on its website to facilitate the discussion of collaborative opportunities among potential applicants. The ARC reserves the right to foster, and to participate in, such discussions.

Institutions wishing to have their potential participation remain confidential for commercial or similar reasons should not be entered into Part A of the EOI.

Part B will be a more extensive summary of the proposal that the ARC will review for alignment with the designated priority areas and to assist with its planning. Potential applicants may be advised if there is a perceived mismatch. However, final determinations regarding possible misalignment between an application and the priority areas will be made by the Expert Advisory Committee on the basis of Full Applications as part of the selection process. Part B also estimates the indicative funding that will be requested from the ARC if a Full Application is submitted. Part B will not be published.

Part C requests nominations of five international experts in the relevant Priority Area(s). The ARC will form a panel of assessors from the nominations and other advice. The information requested will allow the ARC to create or update the nominees' entries in the Grant Application Management System (GAMS). Potential applicants should confirm that each nominee is willing to:

- a) be nominated for the assessment panel;
- b) permit the ARC to create a GAMS entry of their professional profile;
- c) assess up to 4 ARC Centre of Excellence proposals in appropriate fields of research using the ARC's on-line assessment system; and
- d) provide assessments in the period 30 September to 13 October 2002.

The ARC reserves to right to use, or not to use, applicant-nominated assessors.

Part D (signed by the Pro Vice-Chancellor Research) certifies:

- a) the accuracy of the information contained in the EOI;
- b) that persons named in the EOI (including potential applicants and assessors) have been advised how the ARC may use their personal information; and
- c) that they understand that the provision of false or misleading information is a serious offence.



2. Additional text
- Part F is completed outside GAMS and provided to the ARC as a paper copy behind the associated Application Form. This part includes a case for a centre addressing the selection criteria (14 pages), a justification of the budget (3 pages) and track record statements for participants (1 or 2 pages) per person.

All pages of additional text should be in black type, use a single column and 12-point font on white A4 paper, printed on one side only and unbound, with at least 2 cm margins on each side. As applications are scanned electronically, applicants must use the following legible font types: Arial, Courier, Palatino, Times New Roman and Helvetica. Variants such as mathematical typesetting languages may also be used. References may be reproduced in 10-point font. Colour graphs or colour photographs may be included but they will be reproduced in black and white. Applications must not exceed the stipulated page length in any part.

A separate document, *ARC Centres of Excellence Instructions to Applicants for Funding Commencing in 2003*, will be available from [www.arc.gov.au](http://www.arc.gov.au) to assist in preparing applications.

#### **5.2.2. Using GAMS**

Applicants will prepare their application form in GAMS and provide it electronically to the Research Office of the administering institution by that institution's closing date. Research Offices have access to GAMS and will allocate GAMS UserIDs and passwords to enable applicants *at their institution* to access the system and create application forms. Applicants who are unable to obtain a GAMS UserID from a Research Office should contact the ARC at [gamsids@arc.gov.au](mailto:gamsids@arc.gov.au).

#### **5.2.3. Number of hard copies**

An original and one identical hard copy are required. The application must be clipped with NAL clips, not stapled. The application form should be printed from GAMS and submitted with the additional text attached. All pages must be numbered consecutively (see *ARC Centres of Excellence Instructions to Applicants for Funding Commencing in 2003*).

#### **5.2.4. Closing date**

Paper applications for ARC Centres of Excellence must be received by the ARC, and the application form completed using GAMS must be submitted, by close of business (AEST) on **Monday 16 September 2002**. Applications may be withdrawn but may not be changed after submission. Additions, deletions and modifications to the application will not be accepted after submission. Applicants must inform the ARC as soon as possible of any material changes in the information provided in an application, e.g. the outcome of an application for funding. Applications received after close of business (AEST) Monday 16 September 2002 will not be accepted.

### 5.2.5. Submission

Applications must be submitted by the administering institution, not by individual researchers. Research Offices should submit the electronic application form in GAMS using the web, and also despatch the full paper application:

By **mail** to:

Executive Director  
ARC Centres of Excellence  
Australian Research Council  
GPO Box 2702  
CANBERRA ACT 2601

By **courier** to:

Executive Director  
ARC Centres of Excellence  
Australian Research Council  
Geosciences Australia Building (formerly AGSO)  
Cr Hindmarsh Drive and Jerrabomberra Avenue  
SYMONSTON ACT 2609

## 6. Assessment Process

### 6.1. Selection Criteria

To ensure that the objectives of the ARC Centres of Excellence program are met, full applications will be assessed in the areas numbered (A)-(H) below. The Case for the Centre (Part F1) should be structured to address the assessment areas in the order listed (14 pages). The items listed within each assessment area are provided to guide applicants' focus on the specific assessment area, and do not need to be addressed individually.

Selection will be based on comparative assessment of the proposed Centres' capacities to deliver outcomes. Applicants are therefore encouraged to write the Case for a Centre (Part F1) in the form of a strategic plan, including their targets for performance in each assessment area.

A. Research program

- i) The creative and innovative nature of the proposed research program, and its capacity to lead to a significant advancement of knowledge in the designated Priority Areas;
- ii) The degree to which the application enhances the concentration and coordination of research in the particular field(s) of research; and
- iii) The adequacy of the conceptual framework, design, methods and analyses and their integration into the aims of the research programs.

B. Investigators

- i) The applicants' track records, relative to opportunity, in the designated Priority Areas, as indicators of their potential to contribute to the Centre's research program;
- ii) The Director's capacity for leadership, vision, management and strategic planning; and
- iii) The commitment of Chief and Partner Investigators to the research program.

C. Research training and professional education

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- i) The potential contribution of the Centre to research training at the Honours, Postgraduate and Postdoctoral level; and
  - ii) The potential value of the education and outreach programs in professional and technical training.
- D. National benefit
- i) The extent to which the Centre would expand Australia's knowledge base and research capability in the designated Priority Areas;
  - ii) The number and spread of applications within and across the designated Priority Areas;
  - iii) The capacity for the research program to enhance innovation in Australia; and
  - iv) The potential of the research project to result in economic, cultural, environmental or social benefits for Australia from the expected results and outcomes of the project.
- E. International, national and regional links and networks
- i) The potential standing of the proposed Centre relative to major international centres in the general field(s) of research;
  - ii) The potential for enhancement of effective international interactions and linkages;
  - iii) The planned links with Australian researchers in universities and other research organisations working in the proposed fields of research;
  - iv) The commitment and mechanisms proposed to provide a national and regional intellectual focus for the planned field(s) of research; and
  - v) The potential contribution of proposed links with scholars in the Humanities and Social Sciences to the Centre's activities.
- F. End-user links
- i) The participation of end-users in research planning and Centre governance;
  - ii) Where applicable, the adequacy of plans and strategies for facilitation of technology transfer including fostering a culture of innovation; and
  - iii) The adequacy of organisational arrangements and plans relating to ownership of intellectual property and/or utilisation or commercialisation of research.
- G. Organisational support
- i) The commitment of the Collaborating Organisations to provide basic infrastructure, including provision of space, equipment, administrative and technical staff support, telecommunications and computing facilities, library and other key resources, over the funding period;
  - ii) The fit or complementarity of the proposed Centre with the Collaborating Organisations' overall research strengths and directions; and
  - iii) The provision of funding to support the Director and key investigators to execute their research leadership roles.
- H. Governance
- i) The adequacy of the proposed management arrangements and responsibilities, including the organisational structure of the proposed Centre, its reporting arrangements both internally and externally, its financial systems, and its

- business and strategic plans which should include milestones for achievement of objectives; and
- ii) The relevance of the performance measures listed in the application to the Centre's objectives and their pertinence for assessing the Centre's performance.

## 6.2. Proposed Budget

Applicants will submit in Part C a proposed five-year budget. An explanation of the budget will be submitted as Additional Text in Part F2 (3 pages). The explanation may include a list of people who, or positions which, will be associated with the Centre, and whose salaries are offered as in-kind contributions, or as part of the indirect costs, or will be funded from the Centre's cash income. The budget will include the following elements:

### *Cash Revenue*

- (a) Requested ARC funding
- (b) Cash contributions from each collaborating organisation

### *Expenses against Cash Revenue*

- (a) Personnel
- (b) Teaching relief
- (c) Equipment
- (d) Maintenance
- (e) Travel
- (f) Other

### *In-kind contributions*

- (g) Personnel
- (h) Other

### *Indirect costs*

Large-scale capital items such as buildings will not be funded. A Centre may purchase a major item of equipment or a facility costing more than \$133,000 using the ARC Centre funding assistance, provided that no more than 75% of the cash payment for any such item is paid from the Centre's ARC funding assistance (i.e. consistently with principles of the Funding Rules for the ARC's 2002 *Linkage-Infrastructure Equipment and Facilities Program*). Centres will be required to seek prior approval from the ARC to purchase such equipment.

## 6.3. Track Records

The relevant track records of people who will be associated with the Centre are part of the selection criteria. Track records of key Centre staff, including the Interim Director, Chief Investigators and Partner Investigators, *must* be provided (2 pages per person). Track Records of other people who will be associated with the Centre *may* be provided to illustrate the scope and level of commitment to the Centre (1 page per person). Track records are assessed relative to opportunity, and people who have had interrupted research careers may describe the circumstances in Part F3.

Track records are provided as Additional Text in Part F3. Each track record should commence with the following information, in order:

- Name (Last name, First name, Title);
- Qualifications (Degree and year of award for each award);
- Current appointment (Organisation & year of appointment; Level and year of appointment to level);
- Relevant employment history; and
- Publication list (up to 6 most significant from past 5 years; up to 4 additional career-best; the number of books, peer-reviewed research publications, and un-reviewed research publications over the past 5 years).

Applicants (Interim Director, Chief Investigators, Partner Investigators) must provide a description of their expertise and proposed roles and contributions to the Centre, with a page limit of up to 2 pages maximum per person, including the information listed above.

Researchers and other people who intend to be associated with the Centre may provide a brief description of their expertise and proposed roles and contributions to the Centre, with a page limit of up to 1 page maximum per person, including the information listed above.

#### **6.4. Expert Advisory Committee**

An Expert Advisory Committee will be appointed by the ARC to evaluate the full applications according to the selection criteria. The Expert Advisory Committee may:

- determine the eligibility of an application including its relationship to the Priority Areas;
- assign assessors to review the applications;
- prepare a short-list of applications, invite short-listed applicants to attend structured interviews, and use information revealed in these interviews in their evaluation;
- rank each application relative to the others on the basis of the application, assessors' advice, and their expertise;
- assess and recommend applications for funding; and
- prepare funding recommendations that are submitted to the ARC Board for endorsement and then to the Minister for approval.

The ARC has procedures for declaring conflicts of interest and for Committee members to withdraw from considering particular applications.

#### **6.5. Short-listing and Interviews**

The Expert Advisory Committee may short-list applications and invite some applicants to attend interviews. Interviews may be held in Canberra, or in one of the Collaborating Organisations, or at a place nominated by the ARC. The ARC will endeavour to provide as much notice as possible of an invitation to attend an interview, but may schedule interviews with as little as three working days notice. The ARC will determine the structure of interviews and will not fund participation in interviews.

## 6.6. Exclusion

Exclusion of ineligible applications by the ARC or by the Expert Advisory Committee may take place at any time during the selection process. Applications may be excluded for contravening the Funding Rules in any way, for instance by:

- failing to submit the application through the appropriate Research Office for certification;
- not meeting the eligibility criteria;
- failing to submit an Expression of Intention to Apply and failing to justify such omission to the satisfaction of the ARC;
- providing incomplete or misleading information; or
- designating the application as Commercial-in-Confidence.

## 6.7. Appeals Process

Appeals will be considered only against process issues and not against scholarly judgement, committee decisions or assessor ratings and comments. Appeals must be made on the appeals form available from the ARC's website ([www.arc.gov.au](http://www.arc.gov.au)).

The form must be lodged through the administering institution's Research Office and be received by the ARC **within 28 days** of the date on the letter notifying the outcome of applications. Appeals are to be addressed to:

The Appeals Officer  
Australian Research Council  
GPO Box 2702  
CANBERRA ACT 2601

# 7. Grant Administration

## 7.1. Offer of Grant

The successful administering institution will be notified in a letter of offer that will indicate the funding to be provided and will include any special conditions.

A Centre may not begin to operate, nor may grant funds be expended, until:

- a) the ARC Funding Contract is executed; and
- b) the administering institution and all Collaborating Organisations have entered into a written Centre Agreement. The Agreement must cover the role of each organisation in the project including:

- contributions by the organisations;
- payment of salaries for ARC Fellows;
- intellectual property arrangements; and
- an undertaking by all organisations to abide by the Funding Contract.

The administering institution must retain the Agreement for the lifetime of the Centre, and forward a copy to the ARC on request.

## 7.2. Commencement of Projects

Centres must commence operation by 30 July in the first year of the grant. Failure to do so may result in termination of funding.

## 7.3. Naming the Centre

The ARC will determine the name for each Centre on the advice of the successful applicants.

## 7.4. Funding Contract

The administering institution must accept and sign the Funding Contract before grant payments can be made. The Funding Contract will include agreed performance indicators. Administering institutions should note that the Funding Contract and ARC post-award management procedures cover the following matters.

### *7.4.1. Reporting requirements*

The administering institution will be required to submit these documents to the ARC:

- *Exceptions Report* on grants that have financial exceptions, by 1 November in the calendar year for which they were granted;
- *End-of-year Report* on the expenditure of grant funds, by 31 March in the year following the calendar year for which they were granted;
- *Annual Report* on the project, by 30 June in the year following the calendar year for which funds were granted, including a report of performance against the agreed Centre performance indicators;
- *Audited Financial Statement*, by 30 June of the year following the year of the grant, in accordance with the Act specified by the ARC; and
- *Final Report* on the project, within six months of the completion of the grant.

The administering institution may propose changes to the agreed performance indicators by writing to the ARC, which has absolute discretion to accept or reject the proposal.

The ARC reserves the right to suspend payment of further instalments of any current grant until the appropriate reports have been received and assessed as satisfactory.

### *7.4.2. Failure to provide reports*

Where an institution fails to submit satisfactory reports as required, the Minister may determine that funds have not been used in accordance with conditions applicable to the grant, and that all or part of the grant must be repaid. In this case, the ARC may withhold the remainder of the Centre funding assistance under the Program for the current year or initiate recovery of grant money.

### 7.4.3. *Varying the Funding Approval*

Requests to vary the funding approval must comply with the requirements specified in the Funding Contract and be forwarded in writing by the administering institution's Research Office, to the ARC.

## 7.5. Reviews

There will be a full review of the performance of a Centre in the third year of its operation. The third-year review will examine the extent to which the Centre has met its previously stated aims and objectives, the progress against the Centre's performance targets, the quality of outcomes to date, the management and governance of the Centre and the extent to which it has met its agreed objectives. Satisfactory progress in these areas is a condition for the Centre to receive ARC funding in its fourth and fifth years.

Centre reviews may be held at any time, and particularly in special circumstances such as a change of Director or withdrawal of a major collaborating organisation. Persons undertaking reviews for the ARC are to be given full access to all accounts, records, documents and premises relevant to the research being funded by the ARC.

Applicants should be aware of provisions of Part 8 of the *Financial Management and Accountability Act 1997*, which provide the Auditor General or an authorised person with the right to have, at all reasonable times, access to information, documents and records.

## 7.6. Financial Management — Payments

Subject to Government appropriations, payment of funds will be made to institutions in regular instalments, in accordance with approved payment arrangements made under the *Australian Research Council Act 2001*. Funds must be used only for approved purposes, otherwise they must be returned through the usual payments system.

## 8. Other Matters

### 8.1. Freedom of Information (FOI)

All documents created or held by the ARC with regard to the ARC Centres of Excellence program are subject to the *Freedom of Information Act 1982*. Unless a document falls under an exemption provision, it will be made available to the general public if requested under the *Freedom of Information Act 1982*.

All FOI requests should be referred to the Chief Executive Officer of the ARC. Decisions regarding requests for access will be made by the authorised ARC officer in accordance with the requirements of the *Freedom of Information Act 1982*.

### 8.2. Privacy

The ARC is bound by the provisions of the *Privacy Act 1988*. Section 14 of the *Privacy Act 1988* contains the Information Privacy Principles (IPPs) which prescribe the rules for handling personal information.

Persons, bodies and organisations involved in the ARC Centres of Excellence program are requested by the ARC to abide by the *Privacy Act 1988* when handling personal information collected for the purposes of that program. In brief, persons, bodies and organisations should ensure that:

- personal information is collected in accordance with IPPs 1-3;
- suitable storage arrangements, including appropriate filing procedures are in place;
- suitable security arrangements exist for all records containing personal information;
- access to a person's own personal information held by the organisation is made available to the person at no charge;
- records are accurate, up-to-date, complete and not misleading;
- where a record is found to be inaccurate, the correction is made;
- where the person contends that a record is inaccurate, and it is found to be accurate, the details of the request for amendment are noted on the record;
- the personal information is only to be used for the purposes for which it was collected, or for other purposes where expressly allowed by IPP 10; and
- personal information is only disclosed in accordance with IPP 11.

### **8.3. Privacy Complaints and Advice**

Complaints about breaches of privacy and requests for advice about privacy should be referred to the Chief Executive Officer of the ARC. Privacy complaints can be made directly to the Federal Privacy Commissioner, however the Federal Privacy Commissioner prefers that the ARC be given an opportunity to deal with the complaint in the first instance.

### **8.4. Confidentiality**

Information contained in applications is regarded as confidential unless otherwise stated and will be received and treated as confidential by the ARC, organisations and assessors.

### **8.5. Intellectual Property**

Applicants must agree to comply with the intellectual property statute of the administering organisation and with the *National Principles of Intellectual Property Management for Publicly Funded Research* (available at [www.arc.gov.au](http://www.arc.gov.au)).

### **8.6. Incomplete or Misleading Information**

It is a serious offence to provide false or misleading information. If an application is incomplete or contains information that is considered misleading, it will be excluded from any further consideration for funding.

If the ARC believes that omission or inclusion of misleading information is intentional, or if there is evidence of malpractice, the ARC will refer the matter for legal advice. The Commonwealth Government is committed to protecting its revenue, expenditure and

property from any attempt, either by members of the public, contractors, sub-contractors, agents, intermediaries or its own employees to gain financial or other benefits by deceit.

Examples of malpractice include, but are not restricted to:

- providing fictitious track records;
- falsifying claims in publications records (such as describing a paper as accepted for publication when it has only been submitted).

## 8.7. Contact Points

For further information, the institution's Research Office should be contacted in the first instance.

Enquiries about ARC Centres of Excellence may be addressed to:

Executive Director  
ARC Centres of Excellence  
Australian Research Council  
GPO Box 2702  
CANBERRA ACT 2601  
Email: [ncgp@arc.gov.au](mailto:ncgp@arc.gov.au)  
Phone: 02 6284 6600  
Fax: 02 6284 6638  
Web: [www.arc.gov.au](http://www.arc.gov.au)

## APPENDIX 1: Designated Priority Areas of Research

### Nano-Materials and Bio-Materials

The development of advanced techniques in materials science and in biotechnology underpins progress and growth in almost every area of industrial and economic activity. The marriage of biotechnology and materials science promises exciting research opportunities, with enormous potential for economic, social and environmental applications and impact.

Biotechnology promises to revolutionise our approaches in areas such as medicine, microbiology and agriculture. Reconstitution of molecular motors, DNA and DNA-protein recognition systems, bio-membranes, and the reconstruction of extracellular and intracellular matrixes, are likely to form the basis of new generation biosensors, bio-inspired materials, high throughput screening systems, chloroplast-like energy transduction systems, and tissue reconstruction procedures.

Materials such as metals, ceramics, polymers, composite materials and natural products are used in a wide range of sectors, such as manufacturing, construction, infrastructure, communications, transport, agriculture and medicine. The ability to “tailor” material properties at scales near to those of individual atoms and molecules promises to allow the production of materials with novel mechanical, thermal, chemical and surface properties, and with vastly improved performance compared to conventional materials. As well, the ability to form nano-scale assemblies of atoms and molecules is vital to advances in computing, drug design, chemical processing and synthesis, and sensor development.

Australia has extensive existing research strengths both in advanced materials science and in biotechnology. Priority funded research into nano-materials and bio-materials would build on this existing base, in these areas of internationally recognised importance, and would lead to:

- higher performance levels, and hence greater materials utilisation efficiency, to improve product performance and conserve natural resources;
- improved cost-effectiveness and value-added use of materials through advanced manufacturing;
- the development of novel devices, sensors, and techniques for medical, biochemical, industrial and environmental applications; and
- revolutionary new ways to produce implants for medical applications, and the “production” of replacement organs.

### Genome/Phenome Research

The complete description of the human genome and those of other organisms has been a major achievement of modern science. There is a heightened expectation that gene therapies and the genetic improvement of plants and animals of agricultural importance by gene transfer will lead, among other things, to the eradication of inherited disease and to a solution to the world’s food problems. However, the connection between an organism’s genes (its genome) and its physical appearance and behaviour (its phenotype) is exceptionally complex and, at present, highly elusive. The growth and differentiation of cells and an organism’s predisposition to disease can be controlled by multigene clusters and fine control of the gene expression mechanisms. Although molecular biologists have been very successful in identifying and manipulating genes, the control of gene expression and the interactions of

gene products which lead ultimately to the expression of a unique phenotype are poorly understood.

The reductionist approaches of molecular biologists have often focused on the analysis of bimolecular systems (protein-protein, protein-DNA, protein lipid). Although it has been revealing to understand these interactions, the reactions that lead to the expression of a unique phenotype are infinitely more complex. Nevertheless, molecular genetics coupled with the use of modern technologies based on microchip gene arrays and high through-put and high sensitivity screening are allowing scientists to experimentally access these complex systems and to describe the way in which environmental and genetic factors cooperate positively or negatively to determine the final phenotype.

The post-genomic era will see an increasing focus on the nature of the link between the genome and phenome. Molecular biologists will continue to describe DNA sequences, but there will be an increasing need for biologists who understand not only molecular genetics but also the behaviour of the whole cell, the whole tissue and the whole organism. The problem requires a team approach and the collaboration of molecular biologists, cell biologists, physiologists and biophysicists.

Key areas of study include:

- Genomics and bioinformatics;
- cell differentiation;
- control of gene expression;
- cell signalling pathways;
- energy transduction;
- multigene control of the phenotype traits; and
- identification of quality and disease resistance genes in plants and farm animals.

### **Complex/Intelligent Systems**

Real-world systems are almost always made up of a large number of components that interact in varying and complex ways. This leads to complex behaviour that is difficult to understand, predict and manage. Research into the characterisation and control of such systems attempts to describe them in explicit (often mathematical) ways, in order to provide enhanced degrees of understanding, predictability, control and efficiency in management.

Very simple control systems include the thermostat that controls the temperature of a hot water system, or a street light that comes on at dusk. Much more complex systems which benefit from the application of research into control and system characterisation include the Internet, air traffic control, irrigation, robotics and a wide array of systems associated with power distribution, telecommunications, defence, manufacturing, transport and finance, as well as ecological and biological systems.

Complex systems are modelled and control strategies implemented by mathematicians, computer scientists, information scientists, engineers and other scientists from a broad range of disciplines.

Relevant areas of research include:

- system analysis and control theory;

- mathematical and statistical modelling;
- system and software engineering;
- software-hardware co-design;
- intelligent systems, and
- communications engineering.

## Photon Science and Technology

Photon Science and Technology is one of the major growth areas of modern science and technology. Unexpected discoveries in basic photon science, new applications that penetrate many disciplines very swiftly, and very rapid idea-to-market cycles characterise the field. Australia has exceptional quality and some considerable breadth and depth in photon science research, with a demonstrated capacity to found and grow commercial ventures.

Photon Science and Technology includes:

- modern areas such as:
  - laser science and applications;
  - optical fibres and communication systems;
  - photonics, linking photon science and electronics;
  - materials characterisation by synchrotron and other X-ray sources; and
  - atom optics and quantum computing; and
- traditional areas such as:
  - optical materials and components including astronomical instrumentation;
  - solar energy conversion (for example silicon photovoltaics and artificial photosynthesis);
  - photometry and spectroscopy; and
  - human vision.

## APPENDIX 2: Eligible Higher Education Institutions

### Higher education institutions receiving Commonwealth funding on a triennial basis

#### New South Wales

Charles Sturt University  
Macquarie University  
Southern Cross University  
The University of New England  
The University of New South Wales  
The University of Newcastle  
The University of Sydney  
University of Technology, Sydney  
University of Western Sydney  
University of Wollongong

#### Victoria

Deakin University  
La Trobe University  
Monash University  
RMIT University  
Swinburne University of Technology  
University of Ballarat  
The University of Melbourne  
Victoria University

#### Queensland

Central Queensland University  
Griffith University  
James Cook University  
Queensland University of Technology  
The University of the Sunshine Coast  
The University of Queensland  
University of Southern Queensland  
Bond University

#### Western Australia

Curtin University of Technology  
Edith Cowan University  
Murdoch University  
The University of Notre Dame Australia  
The University of Western Australia

#### South Australia

The Flinders University of South Australia  
The University of Adelaide  
University of South Australia

#### Tasmania

University of Tasmania  
Australian Maritime College

#### Northern Territory

Batchelor College  
Northern Territory University

#### Australian Capital Territory

The Australian National University  
University of Canberra

#### Multi-State

Australian Catholic University