To support excellence in research
To build Australia’s research capacity
To provide informed high quality policy advice to government
To enhance research outcomes through effective evaluation
To raise the profile of Australia’s research effort and be an effective advocate for its benefits
The ARC

National Competitive Grants Program
$810M in 11-12

Discovery & Fellowships
$502 M

Linkage & Centres
$308 M

Evaluation and Policy

Excellence in Research for Australia

- Statutory Agency established 2001
- Mission: to deliver policy and programs that advance Australian research and innovation globally and benefit the community
- Fund direct costs to Universities and partners
- All disciplines except clinical medicine & dentistry

Government Investment in R&D 2011-12

- CSIRO 8%
- Other Government 11%
- Business & Innovation 24%
- Investigator Driven 4.5%
- Other Science 4%
- Energy and the Environment 5%
- Rural 2%
- Other Health 6%
- Universities 21%
- NHMRC 8%
- ARCs 9%
- CRCs 2%
- Universities 21%
- Other 6%
- NHMRC 8%
- ARCs 9%
- CRCs 2%
- Other 6%
- NHMRC 8%
- ARCs 9%
- CRCs 2%
- Other 6%
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- Other 6%
- NHMRC 8%
- ARCs 9%
- CRCs 2%
- Other 6%
- NHMRC 8%
- ARCs 9%
- CRCs 2%
- Other 6%
What problem were we trying to solve?

- Demonstrate quality/value of investment in university research to government
- Raise the quality of Australian research effort

Australian academic publishing practices

Year that publications measure was introduced

Quartile 1 highest impact

Quartile 4 below median impact

Source: Butler 2002

Share of Science Publications

Year

1985-
89
1986-
90
1987-
91
1988-
92
1989-
93
1990-
94
1991-
95
1992-
96
1993-
97
1994-
98
1995-
99
1996-
00
Scale of ERA 2010

- All 41 eligible institutions submitted data
- Over 330,000 unique research outputs
- 55,000+ researchers represented
- 2,435 units of evaluation assessed at 2 and 4-digit level
- 149 Research Evaluation Committee (REC) members
- 500+ Peer Reviewers
- All aggregated data in the *ERA 2010 National Report.*

The ERA 2010 Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1</td>
<td>Physical, Chemical &amp; Earth Sciences</td>
</tr>
<tr>
<td>Cluster 2</td>
<td>Humanities and Creative Arts</td>
</tr>
<tr>
<td>Cluster 3</td>
<td>Engineering and Environmental Sciences</td>
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<tr>
<td>Cluster 4</td>
<td>Social, Behavioural and Economic Sciences</td>
</tr>
<tr>
<td>Cluster 5</td>
<td>Mathematics, Information and Communication Sciences</td>
</tr>
<tr>
<td>Cluster 6</td>
<td>Biological Sciences and Biotechnology</td>
</tr>
<tr>
<td>Cluster 7</td>
<td>Biomedical and Clinical Research</td>
</tr>
<tr>
<td>Cluster 8</td>
<td>Public and Allied Health, and Health Sciences</td>
</tr>
</tbody>
</table>
ERA 2010 Process Overview

<table>
<thead>
<tr>
<th>Volume &amp; Activity</th>
<th>Ranked Outlets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citation Analysis</td>
<td>Esteem</td>
</tr>
<tr>
<td>Research Income</td>
<td>Applied Measures</td>
</tr>
<tr>
<td>Peer Review</td>
<td></td>
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</tbody>
</table>

Please note – no weightings

Research Evaluation Committee

ERA 2010 Ratings by Cluster

- Public and Allied Health Sciences
- Mathematical, Information and Computing Sciences
- Biomedical and Clinical Research
- Engineering and Environmental Sciences
- Biotechnology and Biological Sciences
- Physical Chemical and Earth Sciences
- Humanities and Creative Arts
- Social, Behavioural and Economic Sciences

Web: arc.gov.au | Email: info@arc.gov.au

1/19/2012
Changes for 2012

- Changes to the ranked journals and conferences
- Interdisciplinary Research
- Raising the Threshold
- Capturing Applied Research
- Eligibility for fractional staff
McClintock
Cornell ~ 1931

Waxy

Purple

+ 

Not Waxy

Not Purple

Not Waxy

Purple

Waxy

Not Purple

Barbara McClintock
Nobel Prize
Physiology and Medicine 1983

- >30 years after initial research on controlling elements of genes
- Work done in plants (not animals or humans)
- Woman without tenure
- #7 in sciences
- Science took a long time to catch up (communication?)
- Sole winner
- Published relatively few papers
“The Dept of Botany does not wish to reappoint her, chiefly because they realise her interest is entirely in research ..........; partly as she was not entirely successful as a teacher of undergraduate work. The Dept. Obviously prefers a less gifted person who will accept a large amount of routine duty.”

• **Weaver on McClintock 1933**
The ARC does not ......

• Employ researchers directly
• Aim to provide a complete externally funded career structure
• Funds all the excellent research proposals it receives

Discovery Projects for funding commencing in 2012

• A new senior career award within Discovery Projects - DORA
• ARC Discovery Fellowship no longer available (APD, ARF/QEII, APF)
• Funding for 3 yrs maximum
• Simplification of Funding Rules, application & assessment processes
• Revision of the selection criteria & assessment
What problem were we trying to solve?

• Range of diverse & overlapping Fellowships across the National Competitive Grants Program
• Success rates of ECRs within Discovery Projects
• Gender disparities identified in Discovery Projects
• Consequences of uniform selection criteria
• Need to build Australian research capacity
• Need to simplify a complex scheme
What is the ARC doing?

• More women (re workload) and “well trained” men on committees

• Ease restrictions on fellowships (PT, longer entry periods)

• Track record replaced with ROPE

Discovery Early Career Researcher Award (DECRA)

• Provide career opportunities for early-career researchers who have been awarded a PhD within five years or, commensurate with significant career interruption, within eight years

• Up to 200, three year Awards will be available each year, commencing in 2012.

• Funding of up to $125,000 will be provided to support a fixed salary ($85,000) and project costs.
DECRA Objectives

- support and advance promising early career researchers
- promote enhanced opportunities for diverse career pathways
- focus research effort in the National Research Priority areas to improve research capacity and policy outcomes
- enable research and research training in high quality and supportive environments.

DECRA Selection Process

- Selection criteria: 50% project quality; 30% candidate; 20% institutional support
- The National Research Priorities are not a separate selection criteria
- Selection process is separate from Discovery Projects using the A-E assessment
- Proposed improved feedback to unsuccessful applicants
- No rejoinders
DECRA Support

- ARC funding will be provided to support salary ($85K fixed p.a. including on costs) and project costs (at up to $40K p.a.)
- Administering Organisations may ‘top up’ the salary and/or project costs
- Funding will be available for up to three years FTE from the ARC
- Flexibility for extending the period of the Award up to six years

Australian Laureate Fellowships

- 2x PhD
- 2x Post-Doc
- 17 5-year awards

Discovery Early Career Researcher Award (DECRA)

- $125,000
- 200 p.a. 3-year awards

Researchers in Industry Training Awards

- $30,000
- 100 3-year awards (bi-annual)

Future Fellowships

- Up to $143,000
- 200 p.a. 4-year fellowships

Encouraging Opportunity
Tips on writing a quality research proposal

• Write down a 100-word summary of your proposal

• Show it to a neighbour/friend/family member and talk about it with them

Quality of the Project

• Must be a good idea
• Right Scope and Scale
• Innovation and novelty
• Carefully temper ambitious goals with plausible approaches
Top Ranked Proposals

- Manage to balance technicality and accessibility
- Present problems and/or controversies and explain how they will solve them
- Explain how the momentum of the issues demands funding now
- Show how Australian work fits into the international picture
- Back up compelling claims with evidence and others’ judgments
- Display evidence of responsible but often daring approaches to the problem

Research Opportunity and Performance Evidence (ROPE)

- Changing how we measure excellence
  Track record v. Performance evidence

- Assessors take into account any career interruptions, such as:
  – Childbirth
  – Carer’s responsibility
  – Misadventure
  – Debilitating illness
Low Ranked Proposals

- Use too much technical jargon
- Make grandiose and implausible claims about outcomes
- Don't support claims of excellence or progress with evidence
- Don’t relate to cutting edge research areas
- Are weakly linked into national and international research networks
- Emphasize the collection of data rather than the solution of controversies

Avoid sense of entitlement

We need to do this because the rest of the world is doing it...

Demonstrate that your research offers an advantage for Australia and you are in the right place to do it
Communication

“If you have an important point to make, don’t try and be too subtle or clever. Use a pile driver. Hit the point once and then come back and hit it again.”

Whole of Government

• Commitment to Budget Surplus in 2013
• Natural Disasters and Australian dollar impacting on revenue
• Tight political situation raising expectations and requirements
  – Stakeholders
  – Reporting
• Big ticket items-health, mining tax, carbon tax etc.
<table>
<thead>
<tr>
<th>Would (why?)</th>
<th>Should (why not?)</th>
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<tr>
<td>• Outcomes</td>
<td>• Health</td>
</tr>
<tr>
<td>• Broader benefits (including to higher education)</td>
<td>• Welfare</td>
</tr>
<tr>
<td>• Australian natural advantage</td>
<td>• Defence</td>
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<td></td>
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