Introduction to Fellowships

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Today’s session

• Where to look for funding opportunities
• How to apply
• What selection panels look for
• How to maximise your chances of success
What is a fellowship?
Example One

Royal Commission for the Exhibition of 1851

- 3 years or less postdoc experience
- Innovative research
- Scientists or engineers
- All nationalities to conduct research in UK
- Closes 15 Feb 2018
- 8 awards each year
- Should usually be a different place to your PhD
- Salary plus £6000 a year for up to 3 years
Royal Society University Research Fellowship

- Natural sciences (including maths and engineering, but excluding life sciences)
- 3-8 years research experience since PhD
- All nationalities
- UK institution
- 5 years with possible 3 year extension
- Salary plus research expenses ~£60k
Benefits for you of having a fellowship

- Proof that you can win money for your ideas
- Shows your scientific independence
- Chance to start to establish own group

Increases your competitiveness for permanent academic jobs
Where to find out about them

• Database of all funding for research
• Access with your Cambridge Raven login
• Try searching ‘early career’
• Includes expected as well as live calls – useful for planning
Key Funders in the Physical Sciences and Engineering

- Royal Society
- ERC
- Leverhulme Trust
- Research Councils (NERC, EPSRC etc)
- Marie Sklodowska-Curie Actions
- Royal Academy of Engineering
- Winton programme for physics of sustainability
- Royal Commission for the Exhibition of 1851

http://www.careers.cam.ac.uk/pdocsci/academic/funding/FindFunding.asp
Key Funders in the Life Sciences

- Wellcome Trust
- Cancer Research UK
- Alzheimer’s Research UK
- EMBO
- Medical Research Council
- AND MANY MORE

- [http://www.careers.cam.ac.uk/pdocsci/Academic/Funding/Life.asp](http://www.careers.cam.ac.uk/pdocsci/Academic/Funding/Life.asp)
Special schemes

• L’Oréal-UNESCO women in science
  • 12 month postdoc research in any area of sciences, maths and engineering

• Daphne Jackson Trust
  • To return after a career break of 2 or more years for family, caring or health reasons
  • Part-time, 2 year fellowship
  • Flexible
To start you need an idea with impact

- What are you interested in?
- What could you do?
- Are other people doing it?
- How could you do it differently?
- Who will find this interesting?
- Why is it important?
- How does it contribute to progressing your field?
- What are the ultimate applications?
Preparation checklist - practicalities

- Check eligibility and deadlines
- Talk to heads of groups who could host you
- Get support of the head of department
- Find out about administrative processes where you are applying
- Find out how selection works for the scheme
- Talk to people holding this fellowship if you can, borrow their application!!
- Write application
- Submit in time for admin processes to happen before the deadline
How do funding bodies assess proposals

Submit proposal
• NB beware of internal deadlines and competitions

Distribution to reviewers
• May be allocated on subject groups
  • ‘College of reviewers’
  • Role of portfolio managers

Initial screen
• Review by small group (2) reviewers closest to your discipline

In-depth review
• Proposals sent to several reviewers and detailed reviews sought
  • May be able to nominate reviewers
  • Find out what reviewers are asked to comment on

Panel
• Reviewers gather and discuss proposals
  • Proposals ranked
  • Cut off determined by available funding

Interview
• Not used by all schemes

Offer
What might you be asked to submit?

- Personal summary/statement/track record
- The proposal
- Lay summary
- Impact statement
- Justification of host/resources
- Financial details/budget
- Work plan
- Letters of support (from collaborators/partners/host)
A good research proposal...

• Engages the reader early on

A title can work well, and state your objectives as early as possible, before you get too deep in to the context-setting

“If you don’t grab my attention in the first paragraph, you’ve lost me”, Dr Melinda Duer, Reader in Chemistry
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- Sets the context for why your research is important, and how it relates to the bigger issues in your field

The demand for bandwidth is increasing rapidly and shows no signs of slowing down, and the internet already consumes up to 10% of the world’s electricity. I propose to send considerably more information down optical fibres, by creating highly flexible optical interferometers that can be completely reconfigured in a few milliseconds.
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• Tells them what you are actually going to do

• Is accessible to readers outside your specialism (simplifying doesn’t mean dumbing down)

• Demonstrates novelty, although preliminary data is good
A good research proposal...

• Is well thought-through – what might go wrong? Timelines.

‘Quantum optics is the riskiest aspect of my proposed research as it is highly sensitive to loss, but even if some experiments prove intractable in the short term, proving the principle of dynamic waveguides and characterising the requirements for such devices would be a significant contribution to the field’.

• Shows that you have the appropriate experience to carry out the work, and that it is based on your own ideas

Talk about your specific achievements in the field so far – what are your major research achievements in the area relevant to your proposal? Back up your statements with evidence such as papers, awards and invited talks.

‘I have a track record of world-class science within OE, bringing fresh ideas to a highly interdisciplinary field. I was the first to demonstrate techniques to directly quantify the contribution of difference electron-hole recombination pathways within OSCs…’

• Sells your research

‘This research will build into a new understanding of how triplets interact within organic materials. Based on this I will be able to design OLEDs which promote TTA and so significantly increase their quantum efficiency. If successful these methods have a direct pathway to commercial OLED manufacture through Cambridge’s spin-outs and will grow the UK’s stake in this complex and important field.’
The proposed project seeks to **open a new research front** within the field...

Outputs from the project will be a **complete understanding of the properties of these** new objects and a **road map charting the next steps for research in the field**.

An **innovative and emerging** materials science led approach is now required to understand the factors at play limiting xxx, thus opening the door to realising their functional potential. ... This **proposal strikes at the heart of all these issues** ...

**This world-leading study** will enhance Europe’s strengths in public health, nutrition and genetic epidemiology, and create a valuable future resource.

Our study will **provide decisive evidence on this debate** by proposing a **new methodology** for studying the impact of economic policies on public health, and in so doing **advancing an emerging new research tradition**...

Paleomagnetism has played a pivotal role in developing our modern understanding of the Earth, and remains one of the primary tools used to study the structure and dynamics of the Earth and other planets...... Adopting **cutting-edge techniques from physics and materials science** ...

Some of the most interesting and controversial periods of Earth’s history occur far beyond the current limits of our confidence in the paleomagnetic signals used to study them. xxx **will solve this problem by**...
Powerful phrases about you

- I identified….
- I led….
- I independently….
- I was the first to demonstrate….
- I have been recognised for….
Heilmeier’s catechism

Ask yourself:

- What are you trying to do? Articulate your objectives using absolutely no jargon.
- How is it done today, and what are the limits of current practice?
- What's new in your approach and why do you think it will be successful?
- Who cares?
- If you're successful, what difference will it make?
- What are the risks and the payoffs?
- How much will it cost?
- How long will it take?
- What are the midterm and final "exams" to check for success?
Further resources

- Seek support from PI, colleagues, mentors
- Appointment with postdoc careers adviser to discuss application or mock interview

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- Books on writing research proposals available in our library
- Research Professional database www.researchprofessional.com
- Academic interview skills booklet