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Research Grant Writing Workshop
Florence Nightingale School
of Nursing and Midwifery
King's College London
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Programme

Morning: Things you need to know.

- [Questions to Answer Before You Start](#)
- [Application-Writing Strategy](#)
- [The Sales Pitch](#)
- [What is a Sub-project?](#)
- [Aims and Objectives](#)
- [Writing Guidelines](#)
- [A Bad Sales Pitch?](#)
- [What a Grant Application has to Achieve](#)
- [The Magic Formula](#)

Afternoon: Things you need to do.

- [Recipe for a Case-for Support](#)
- [Preparing Ingredients](#)
 - [Sales Pitch](#)
 - [Project Intro & Outro](#)
 - [The Elevator Pitch](#)
 - [First Sentence Exercise](#)
- [Key Sentences and Structure](#)

Introduction

This workshop is designed to start you working on an extremely efficient 'recipe' for an application for a research project grant, such as a research council standard grant. The morning session is to discuss the things you need to know. The afternoon session is to get you working on the things you need to do to start writing. If you have a project in mind at the start of the day and you can answer [these questions about it](#), you should have a rough draft of the skeleton of the case for support, in the form of [10 key sentences](#), by the end of the day. If you don't have a suitable project in mind at the start of the day you can practise the skills of writing the 10 key sentences with a dummy project. There are two things you need to do to prepare for the workshop. - First, it is essential for several of the exercises that you come prepared to talk about a research project. Ideally this will be a project for which you intend to write a grant application but you can use a piece of research that you have already done. - The workshop is aimed at mainstream UK project funders like the research councils (AHRC, BBSRC, EPSRC, ESRC, MRC, NERC), the Leverhulme Trust and the Wellcome Trust. Find out which is best for you

My delivery style is interactive, so feel free to ask questions throughout the day. This handout contains all the visual material to be used during the day with clickable links to the main sections in the programme (above) and to the full contents slide-by-slide (below).

Andrew Derrington

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Questions to answer before you start

1. State the overall aim of your project in terms that would be intelligible to someone outside your research field.
2. Name the funder and research scheme you are targeting.
3. What makes the research aim important for the target funding scheme.
4. Describe the overall research methods.
5. For each research question or aim that will be answered by your project (ideally there will be 3).
 1. State the aim or question
 2. Describe how the research will answer this question or meet this aim.
 3. Say what makes it important to answer this question or meet this aim in the context of your project.
6. Impact
 1. Who will benefit most from this research?
 2. How will they benefit?
 3. What will you do to ensure that they benefit?

If you can't answer the questions, don't start.

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Alternative Questions

Imagine you got your grant 6 months ago

1. For the current sub-project
 1. What are you actually doing in this sub-project (40 words)?
 2. What outcome will you get?
 3. What makes this outcome important?
2. Repeat for the other 2 sub-projects
3. What will be the overall outcome of the project?
 - What makes the overall method inherently plausible?
 - Have you used the method to produce high quality outputs?
4. What is the significance of the overall outcome?
 1. What will it allow us to do that we cant do now?
 2. Who wants to do that?
5. Which priorities of the funder does the project meet, and how?
6. What must be done to maximise the benefit from the project?

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Strategy

Your strategy must accommodate the likelihood of rejection

- Most well-written grant applications get rejected.

- Rejection can be a devastating experience

. . .

- If you need a grant, you should plan to write 5 or 6 based on the same set of ideas
- Never get down to your last rejection.

. . .

- If you get 6 rejections, it's time to develop a new set of ideas.

. . .

- You need to be able to multiplex grant applications
 - Different Outcomes?
 - Different Datasets?
 - Different Objectives, Same Aims?
- You need to be able to write well and quickly.

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Should I use a successful application as an example to copy?

- About 75% of funded applications are very badly written
- Apply the following test

. . .

- Can you find single-sentence answers to the following questions in 10 minutes:-

1. What is the overall aim of the project?
 2. What makes the aim important?
 3. What are the overall research methods?
 4. For each aim or research question (there should be 3 or 4):-
 1. What is the aim or question?
 2. How will the research will answer this question or meet this aim.
 3. What makes it important to answer this question or meet this aim in the context of your project.
- If you can't, it's a bad example to follow.

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Writing Guidelines

- Should repetitions use the same words or different words?

. . .

- Same words: NO SYNONYMS

. . .

- [Key statement](#) at the start of every section
- Re-use tag phrases across key statements
- Re-use [tag phrases](#) in headlines

...

- Punchline at top of para (~6 paras per page)

...

- Strong Verbs (no adverbs, no nominalisations)
- Short sentences
 - [Health Check](#)

...

- Avoid value claims (state evidence instead)
- Bullet lists good, lists in sentences bad.

...

- No initialisations
 - unless the expansion is in the same paragraph
 - or no expansion is needed

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Case for Support as Sales Pitch

- Introduction
 - Tell them the Outcome & how important it is.
 - Tell them everything that is to come

...

-
- Background/Literature review
 - Explains how 3 research outcomes are really important.
 - * You can call these the “AIMS”
 - * You can also call them “RESEARCH QUESTIONS”
 - * [And describe them in KS 3-5](#)

...

-
- Description of Project/Methods/Research Plan
 - Describes the research activities in each of 3 [sub-projects](#) and makes it clear that they will produce the 3 important outcomes.
 - * You can call these the “OBJECTIVES”
 - * [And describe them in KS 7-10](#)

...

-
- Form-Only funders (NIHR)
 - Case for support consists of answers to questions.
 - Make sure Background/Motivation answer maps onto Research Plan answer.

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Aims & Objectives

...

- Nobody is sure what Aims & Objectives mean, so you can hijack them to reiterate the sales pitch.

...

- Background/Literature review
 - Explains how 3 research outcomes are really important.
 - Make achieving the outcomes the AIMS
- Description of Project/Methods/Research Plan
 - Describes the research activities in each of 3 [sub-projects](#) and makes it clear that they will produce the 3 important outcomes.
 - Make the subprojects the OBJECTIVES.

...

- The AIMS and OBJECTIVES deliver the sales pitch.
 - [Use Tag Phrases so Aims match Objectives](#)
 - Order them so they match the structure and the wording of the case for support.
 - Always try and give both, even if you are only asked for one.

Subprojects

What is a sub-project?

- You break your project into components (subprojects) to make it easier to explain.
 - The sub-projects can be sequential
 - Or parallel
 - Or even different analyses of the same data
 - The only requirement is they produce different, important outcomes.

...

- Each sub-project should produce an important outcome
 - That way the explainer will give a sales pitch.
 - If they know what makes the outcome important.

...

- The perfect number of sub-projects is 3, but 4 is OK.

...

- Don't create dependencies on uncertain outcomes (hostages)

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What a Grant Application has to Achieve

Why you need a magic Formula

Andrew Derrington

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A good case for support is designed for the decision process

1. What do funders want to know?
2. How do funders make decisions
 - What are the implications?
 - The Case for Support as Sales Pitch
 - The Magic Formula

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Funders' questions

1. IS THE PROJECT IMPORTANT (to Them)?
 - Direct Outcomes (discoveries)
 - Indirect Outcomes (training, career development, mobility...)
2. WILL THE PROJECT BE SUCCESSFUL?
 - Will it produce the direct outcomes?
 - Will they be put to use?
 - Will it produce the indirect outcomes?
3. ARE THE APPLICANTS COMPETENT?
 - Can they do the research?
 - Can their institution support it?
4. WOULD A GRANT BE VALUE for MONEY?
 - Are the resources requested Necessary, Sufficient, and Proportionate

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Answers to Funders' Questions

- IMPORTANCE (evidence)
 - Evidence about direct outcomes in literature review
 - Evidence about indirect outcomes in details of project, institutions, & investigators
- SUCCESS (project details)
 - Research activities in relation to outcomes?
 - Impact and dissemination plans..

- COMPETENCE (evidence)
 - Evidence that the team has the necessary skills in publications (quality and authorship).
 - Evidence that PI and institution can deliver the project in track record & facilities.
- VALUE for MONEY (project details)
 - Mention how grant resources will be used in the project.
 - Mention institutional resources needed for the project.

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Which question do you start with?

- IMPORTANCE?
 - Pick an important question
 - * Start the literature review
 - *

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That's how you write a zombie grant...



If the description of the research is less than 50% of the case for support it is probably a 'zombie'.

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Always start with the competence question

- Design a project that you can deliver
 - Do you have appropriate quality publications
 - Do they demonstrate all relevant Skills?
- Don't make the project much bigger than your past funded projects.
 - Big projects go to those who have too many little projects
 - Think about a cost ladder

- * £10K/£30K/£100K /£300K/ £1M /£3M/ £10M
- Don't try to jump to the top of the ladder

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The Decision

- Who decides?
 - Very busy people
 - Very successful
 - * Have their own grants
 - * And research groups
 - * And jobs
 - Not knowledgeable about your particular research area.
- May have 'user' representation
- Supported by secretariat

The Decision: what information do they have?

- Applications
 - Usually a set of 50-100 per meeting.
 - Arrive 3-6 weeks before meeting.
 - Everybody delays reading them as long as possible.
- ...
- Expert referees' reports
 - Written reports with evaluation and score.
 - Usually 2-5 per application
 - Usually arrive before the meeting but often after the applications
 - Often conflicting
- ...
- Designated members' reports
 - Oral report by 2 or 3 members who have read the application.
 - Usually lasts < 5 minutes

The Decision: what is the process?

- Designated members report on the proposal
 - Usually less than 5 minutes
 - Who, what, why, how, outcomes, strengths, weaknesses, summary of referees, how important and exciting, suggested score
 - One person may have to do this for 10 or more grants in a day.

- Probably based on 30-60 minutes preparation.

...

- Discussion by all members of the committee.
 - Even though some of them may be reading it for the first time during the discussion.
 - * They will probably have read the summary beforehand.

...

- All members in the discussion can influence the score.
 - No matter how little they know.
 - And how little time they have spent reading your proposal.

Implications of the decision process?

- Referees will analyse your grant in detail but:-
 - Most of the committee won't read it.
 - The ones who do read it won't know the field.
 - There will be about 100 other applications.
 - This imposes requirements on the case for support.

...

- It must be a very good sales pitch
 - Easy to analyse at a deep level (Referee).
 - Know what's in it by skimming it (Committee Member).
 - Learn the subject by reading it (Committee Member).
 - Memorable and Distinctive (Designated Member).

...

- These properties need a magic formula

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The Magic Formula

- [Key Statements](#)
- [Layout](#)
- [Tag Phrases](#)
- [Repetition](#)

10 Key statements

10 statements define a case for support

- KS1 States the overall aim, the specific approach & an example of success with that approach
- KS2 Says what makes the overall aim important

- KS3,4&5 Say that we need the sub-project outcomes (AIMS) & why.
- KS6 Introduces the project
- KS7,8&9 Summarise the research activities in the sub-projects (OBJECTIVES) and their outcomes.
- KS10 Says what will happen when research is done (Impact?)

...

- Use the key statements as the summary.

...

- Re-use the key statements to introduce the case for support

...

- Use a key statement to begin each subsection
- Then follow it with the detail
 - that convinces the referee

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Use Layout to Communicate with Skimmers and Speed-Readers

- Message on first line of paragraph (ASSERT then JUSTIFY)
 - First sentence of para ASSERTS (topic sentence)
 - Remainder of para JUSTIFIES
 - * This is where you cite literature
 - * This is how you avoid citing too much literature.

...

- White space above each paragraph

...

- Readers' eye movements land on blank lines.
 - Speed-readers will read first line of every paragraph.
 - Browsers will only read first lines.
 - Detail readers will know what to expect in each para

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Teach Terminology with Tag Phrases

KeySentences 3,4 & 5

- 'We need to know' + tag phrase because....
- We need to know the relationship between the performance of single neurons and the performance of the whole visual system in order to establish the likely contribution of single neurons to perception. . . .

KeySentences 7,8 & 9

- 'We will do this sub-project in order to discover' + tag phrase

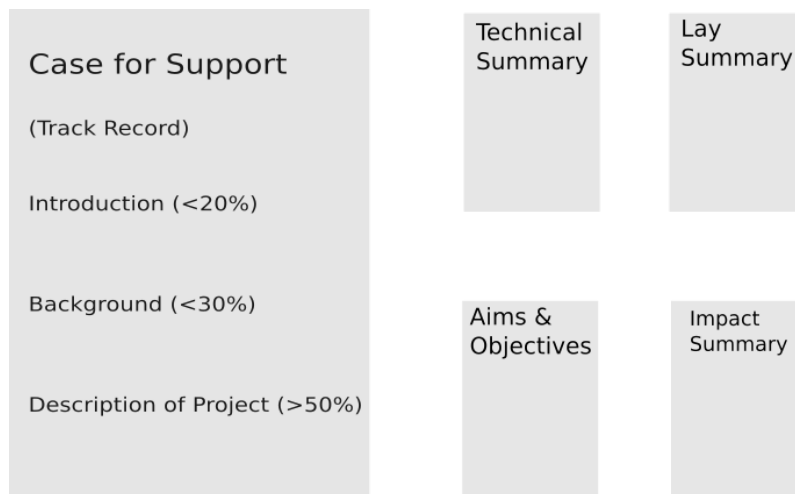
- We will record single neurons during perceptual tasks and calculate sensitivity functions for neural responses and for task performance in order to characterise the relationship between the performance of single neurons and the performance of the whole visual system.

...

- Tag phrases provide meaning - link between aims and objectives
- Use them in headings (make them short enough)

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Re-cycle Text From Case for Support



- Repeat key sentences and tag phrases
 - to provide common structure, and
 - to link
- Maintain structure and order

Resources

What's been funded?

- [Research Council Project Summaries](#)
 - <http://gtr.rcuk.ac.uk>
- [ERC Summaries](#)
- [Leverhulme Awards 2016](#)

Advice on writing:- www.parkerderrington.com/blog

- [How to construct a project](#)
- [The key sentences](#)
- [How to get feedback](#)

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The Recipe

- Write Answers to the Pre-Start Questions
- Make Sure you Have a Sales Pitch
- Prepare your Ingredients
 - Sales Pitch
 - Project Intro & Outtro
 - The Elevator Pitch
- Build the Structure

Sentences 7, 8 & 9 and 3, 4 & 5

The Sales pitch:- “We need to know” & “This will tell us”

- Sentences 7, 8 & 9: “This will tell us” (One per Subproject)
 - Summarise the research activities and state the outcome of a sub-project.
 - “We will do X and this will tell us Y”
 - Structures the Research Plan/Methodology. Introduces a subsection.
 - States an OBJECTIVE (and the aim it will deliver).

▪

...

- Sentences 3, 4 & 5: ‘We need to know’ (One per subproject)
 - Say why we need the outcome of the sub-project.
 - “We need to know Y because Z”
 - Structures the Background: Introduces a subsection
 - States an AIM
 - Can be paraphrased as a Research Question

▪

...

- Rookie mistakes
 - Failing to mention research activities in 7, 8 & 9
 - Describing the research activities instead of outcomes in 3, 4 & 5
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Sentences 6 & 10

Sentence 6 (Project Intro)

- Sentence 6 introduces the introductory part of the description of the project.
 - Summarise the distinctive aspects of the project in fewer than 40 words.

Sentence 10 (Project Outro)

- Sentence 10 introduces your discussion of what will happen after the research is complete
- It will depend to a certain extent on whether the importance is academic or practical or both.
 - State in about 40 words what you will do to maximise the benefit from the project.

Sentence 1 & 2

The Elevator Pitch

1. Sentence 1 should have 3 parts:-
 1. What the project will achieve, in terms meaningful to the whole committee.
 2. The general research approach, to suggest you will be successful.
 3. An example of your achievements using that approach, to show you are competent.

...
2. Sentence 2 says what it is that makes the outcome important. For example...
 1. Quantify the real-world problem it will help to solve.
 2. Say what it will allow us to do that we can't do now.
 3. Prepare to say which named priorities of your funder it contributes to, and how?

Build the Structure with Key Sentences

Standard Structure: [Key sentences as Introduction and Skeleton](#)

[Alternative Structure for BBSRC](#)

Standard Structure

Key Sentences form the Intro and the Skeleton

1. Introduction - Key Sentences 1-10
2. Background - 5 subsections - sells the project outcomes.
 - KS1 State the overall outcome (GENERAL AIM). Then add the detail
 - KS2 Say what makes the outcome important. Then justify in detail.
 - KS3,4,5 Say why we need each research outcome (AIMS) & add detail after each
 - If you can't say why rewrite KS 7,8 & 9
3. Methods. Describes the Project
 - KS6 Summarise the project. Then add detail.
 - KS7,8,9 Summarise each sub-project (OBJECTIVE) & the AIM it achieves. Add detail after each.
 - KS10 Say what happens after the project (impact?). Then add detail.

Alternative Structure

Aim and Objectives introduce the Programme (BBSRC)

1. Introduction to Background - Key Sentences 1-5
2. Background - 5 subsections - sells the project outcomes.
 - KS1 State the overall outcome (GENERAL AIM). Then add the detail
 - KS2 Say what makes the outcome important. Then justify in detail.
 - KS3,4,5 Say why we need each research outcome (AIMS) & add detail after each
 - If you can't say why rewrite KS 7,8 & 9
3. Programme and Methodology Describes the Project.
 - BBSRC requires AIM & OBJECTIVES. Use KS1 & 6-10; then introduce project.
 - KS7,8,9 Summarise each sub-project (OBJECTIVE) & the AIM it achieves. Add detail after each.
 - KS10 Say what happens after the project (impact?). Then add detail.

EPSRC Guidance

- Description of proposed research and its context
 - Background
 - * Introduce topic and explain academic and industrial context
 - * Demonstrate understanding of related work
 - National importance
 - * Contribution to other disciplines, economy & society.
 - * Long term effects; relation to national strategic needs.
 - * Fit with other UK research & EPSRC's [portfolio and strategy](#). -Relation to to EPSRC's [research areas and strategies](#)
 - Academic impact
 - * Describe academic impact
 - * Explain collaborations; justify Visiting Researchers
 - Research hypothesis and objectives
 - * Set out your research idea or hypothesis
 - * Explain why the proposed project is novel and timely
 - * Identify the overall aims of the project, and the measurable objectives
 - Programme and methodology
 - * Detail and justify research methodology
 - * Describe the work programme & milestones for each member of the team,
 - * Explain how the project will be managed.

AMD's Suggested Structure for EPSRC

- Background
 1. Introduce topic and explain academic and industrial context
 - Research hypothesis and objectives
 - * Set out your research aim, idea or hypothesis (KS-1)

- * State the aims and / or objectives using KS 3-5 or 7-9 or both
- 2. **National importance**
 - Summary only - necessary details in secs 3-5
- 3. KS 3; Why this aim is important & feasible
- 4. KS 4; Why this aim is important & feasible
- 5. KS 5; Why this aim is important & feasible
- Programme and methodology
 - 6. General intro; justify research methodology
 - 7. KS7; Details of subproject
 - 8. KS 8; Details of subproject
 - 9. KS 9; Details of subproject
- 10. KS 10; This section can be about impact or follow on. Should tie up loose ends
 - Explain how the project will be managed.

First Sentence Exercise

Why is the first sentence important?

...

- It has to be good enough to make the reader read on
- They will have 99 other applications.
 - They know most of them are headed for the shredder.
- They also have a TV.
- What will make them want to read your application?

...

- Importance?
- Success?
- Competence?

The Perfect First Sentence

1. What the project will achieve, in terms meaningful to the whole committee.
2. The general research approach, to suggest you will be successful.
3. An example of your achievements using that approach, to show you are competent.

The Exercise

1. Interview your neighbour (3 mins)
2. Swap roles and interview again (3 mins)

3. Write a sentence for your neighbour's project (2 mins)
4. Write a Sentence for your own Project (2 mins)
5. Optimise and discuss.

. . .

Remember

1. What the project will achieve, in terms meaningful to the whole committee.
2. The general research approach, to suggest you will be successful.
3. An example of your achievements using that approach, to show you are competent. . . .

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A Bad Sales Pitch

Outcomes Activities and Importance Claims

Can you mark which parts of this text describe the research activities, which parts describe the outcomes and which parts explain the importance of those outcomes?

This project will focus on the human factors that influence the management of disease in livestock, analysing how and why livestock farmers make their decisions, and how this affects disease control, farm productivity and competitiveness, acceptance of agricultural innovation, and adoption of new technologies. Working closely with the Department for the Environment, Food and Rural Affairs (Defra) and world-leading research institutions in North America and mainland Europe, the project will:

- Synthesise existing evidence on barriers and enablers affecting the implementation of Animal Health and Welfare (AHW) best practice
- Identify and examine successful examples of best practice co-production, communication and adoption (including state-sponsored advice, private advisory agencies and extension services) focussing on transferrable lessons from other sectors, international case studies and specific examples from individual livestock sectors in the UK
- Undertake a programme of empirical work to 'follow' the chain of best practice from the issuer of guidance/regulation (public, private or third sector organisation), via key actors in the information supply chain, to individual on-farm practice. Bovine tuberculosis will be used as the focus for the research
- Communicate the findings to a wide range of stakeholders in government and the farming industry, informing policy and practical interventions to enhance AHW management.

Presenter



Andrew Derrington has in-depth experience of the research funding process. He obtained his first research grant, a Beit Memorial Fellowship for Medical Research, while he was writing his PhD. His research was continuously funded by fellowships, project and programme grants for the next 30 years. He served on research grant committees for The Science and Engineering Research Council, the Medical Research Council and the Wellcome Trust. His book, *The Research Funding Toolkit*, which he co-wrote with Jacqueline Aldridge, research and enterprise associate in the School of Psychology at the University of Kent, is the definitive guide to grant writing for early career academics and research professionals. It is based on Andrew's analysis of how grants committees make funding decisions.

Andrew has worked in eight Universities including two in the world top ten.

He has also worked as a journalist. Over several years he wrote two successful columns in the Financial Times. *The Nature of Things* covered science - from astrophysics to zoology. *Psych Yourself Up* was a guide to the different psychotherapies available in the UK.

Andrew set up [Parker Derrington Ltd](#) in 2013. He now works as a consultant, writing research grant applications and providing strategic advice and training to individuals and organizations.

Testimonials

I had a fantastically useful time attending your recent workshop at Leicester University. Writing the 10 key sentences was a very useful exercise and I have, since, worked on them to discover they are a fab tool for any kind of writing really.

Dr Ranjana Das, University of Leicester

Andrew blends easy authority and extensive experience with humour and approachability. The result is a workshop full of practical, memorable advice on how to compete more successfully for research funding.

Professor Peter Clegg, Institute of Ageing and Chronic Disease, University of Liverpool

I attended one of Andrew's workshops when I was a senior lecturer. The hands on advice about how to structure my applications in a really appealing fashion enabled me to win a grant of nearly →£600K the next year. I still implement the advice that I received in that workshop, and pass it down to junior colleagues. I find that Andrew's advice has a high success rate!

Prof Theresa Gannon, University of Kent

I still use the tips you gave me for my successful Wellcome SRF application. Your advice on "12 key sentences" is spot-on and helps people focus on the aspects of the proposal that are critical to success instead of getting bogged down in reams of text.

Prof Mark Baxter, Mount Sinai School of Medicine

Andrew's grant-writing workshops teach you how to convince the world that it needs your research. They are the most useful training events I have ever attended. His advice about how to sell the big idea without compromising on the science was critical to the success of our →£9.3 million ESRC application.

Prof Julian Pine, University of Liverpool