# How to get an Early Career Research Fellowship

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What you should do NOW to increase your chances of getting a Fellowship

List your choices and align your skill set to the Fellowship criteria

Although you may not be thinking about applying for Fellowships for another year, list what Fellowships that you can apply for, their submission deadlines and see what type of requirements they are looking for. Keep this list on the white board in your office room or on a piece of paper stuck up above your monitor as a constant reminder. Having the dates known well in advance helps you to plan your roadmap to submission and will motivate you to have certain milestones reached. If you have not mapped out the submission deadlines you might miss the deadline, or miss eligibility criteria once you decide you are ready to apply. By knowing the Fellowship criteria well in advance will also allow you to build up your skill set. The fellowship might emphasise leadership skills, and by knowing this well in advance you can book yourself onto that annual leadership course run by your University or start to push to supervise a third year project student. The Fellowship might require that you have taken your viva before the submission deadline, so you decide to have your viva two weeks earlier than intended.

The below link consolidates most of the available Fellowships available: https://asntech.github.io/postdoc-funding-schemes/

Give them a call

All funders will have an administrator dedicated for that particular fellowship. They will be intimately familiar with the eligibility criteria and will know what a successful application looks like. The most time-saving and astute thing to do is give them a ring and mop up this free advice! You could give them your background and ask ‘would I be competitive for this Fellowship?’ Other useful questions are: ‘What does a typical successful application/applicant look like?’, ‘I am planning these Aims. Does it fit the medical relevance of this scheme?’ and for the curious of you ‘What is the success rate?’.

Apply for prizes

All prizes that you can obtain means points and points will score you higher in any Fellowship application. At the easiest end are travel grants and scholarships that you can apply either through the meeting you are going to or one of the learned societies that you should be a member. I would always apply for any travel funding even if you have funds acquired. There are many other funding pots available to apply for that will evidence your ambition and show that you have developed your experimental skills. For instance, summer studentships evidence your leadership and management skills. Scholarships for training courses evidence your drive to be at the forefront of new experimental approaches. Symposium funding evidences your organisation skills and standing and influence within your field. Fellowships are competitive and the person reviewing your application will be looking for evidence that you have done more than the average post doc – to receive an outstanding mark in your application you need to be in the top 5% according to one funder. This type of funding is relatively easy to mop up in terms of time and commitment and is part and parcel of a successful Fellowship application. I reviewed a fellowship application once and although the research proposal was exciting and the applicant had a strong publication record there was not one other funding source acquired – not even a travel grant. For this reason it was hard for him to claim that he was an ambitious early career researcher.

Publish papers

You might consider the publishing of papers to be largely outside of your control. After all, as a PhD student or post doc you are usually (unless extremely lucky) doing the research project of your PI
following the experimental road map of your PI. None-the-less I would push your PI, and yourself, to set a deadline for submission of papers so that you have it published or at an advanced stage before the Fellowship deadline. It might be worth checking the Fellowship criteria, some only allow published papers to be listed in the ‘your publications’ section, others allow papers submitted to count. If the latter, then your submission deadline can be that little bit later. You can, however, take solace that, although your publication record is one of the most important and objective measures of your prowess as a Fellowship contender you don’t need first author Nature publications to be competitive (if you do I guess you can skip this section). In addition, you can console in the fact that the more personable Fellowship application allows you to explain your limited number of publications (through the narrative, below) or why they are in lower impact factor specialised journals. For instance, that three-year gap in publications is because you spent three years developing a methodology crucial for your fellowship application (as was my case). Or that your papers in specialist journals evidence a fundamental grounding necessary to pave the way for your larger more impactful research proposal.

**Network**

Even though your research is (hopefully) read by a diverse audience it will probably have been reviewed by two of eight people in your specialised research field – and this will also be the case for your Fellowship application. Make a point of talking to these current leaders in your field at meetings and conferences. Get known and make a good impression. If you don’t know what to say, read their latest paper for inspiration. Bear in mind that meetings are not the only place to network. If there is someone in your field you have not met then manufacture an opportunity. There is nothing wrong with an out-of-the-blue formal email to Professor Smith saying ‘I really interested in technique X. If you have time may I visit your lab to find out more and perhaps give a talk? Yours Sincerely’. Generally people love to hear that someone is interested in their work. You don’t need to know them through your current PI and I would be tempted not to introduce yourself through them. After all, independence is a key criteria of any Fellowship application. They should say ‘Ah yes, Dr X, she has got some good ideas on Y’ not ‘Ah yes Dr X she is Prof. Y’s post doc’. This way they will remember you when a request to review your Fellowship application pings up in their inbox, hopefully in a favourable manner.

**Develop your Fellowship Aims**

The Aims or major goals of your Fellowship need to be developed well in advance of writing your Fellowship application. The longer you are thinking about your Aims the better and more refined they become. It will be of little use to sit down to write your Fellowship application with two months before the deadline and think ‘I wonder what a ground breaking idea would be?’. The reason to develop these ideas early is so that you have time to ask your peers for advice. Your PI and other colleagues are a good starting point. Even better would be the advice of the very people that will likely be reviewing your Fellowship application; those leaders in your specialist research field. Because they will be reviewing your Fellowship application you can cater to their point of view or at the very least cover their criticism. There is nothing wrong with directly asking one of those important research leaders, ‘What do you think about this idea?’ and then using their feedback to refine it. For instance, after speaking to Professor X at a conference he thinks that your antibody will not bind to the C terminus of your receptor and therefore you should develop an antibody specific for the N terminus. In this case either: target the N terminus or explain very clearly why you have chosen the C terminus then add ‘if this doesn’t work I will target the N terminus’. The Aims of your Fellowship will start off very rough, as every new idea does, but with critical reflection and time and the input of objective people they will grow and mature into concrete aims with specific Objectives to achieve them.
If you are currently a post doc the single hardest obstacle is finding a prominent research question that is different to your PI, and collecting the preliminary data to go in your Fellowship application. The best way to do this is to develop Aims complementary to your current work so that the preliminary data for your Fellowship application is something that you will collect anyway as part of your job. You will need to forge a strong case that your current post doc position is necessary for the work you propose in your research proposal, either through training received or expert knowledge that you have acquired. An easy way to come up with novel ideas is to read current reviews. They will often state the major issues and problems to be solved in your field. Whatever Aims you come up with they need to be distinct from your current PI, but complementary to your current skill set and interests. You need to find your niche in the field, something that makes you unique in your research approach.

Don’t underestimate the value of selling your ideas and Aims to non-specialists for two very good reasons. 1. If it’s a good and robust idea you should be able to explain it clearly. 2. If you get through to an interview of a Fellowship application you will have to pitch and defend your ideas to other non-specialists on your interview panel. Pitching your idea orally is very different to how you would write it. Much like you would refine the writing in your Fellowship application with perhaps 20 iterations before the final manuscript, you should do exactly the same for an oral pitch. Like most things, the first time you pitch it will not be perfect, the logic might not flow or you might forget a key bit of background. Pitch it 40 times to 40 different people and it should be well polished.

**It will be hard work**

Applying for a Fellowship is a lot of work – even for the shorter ones. And although your PI might often complain that ‘I spend half my time writing grants!’ at least they are paid to do it as part of their normal working hours. If you are a post doc you will not be so privileged, unless you have an awesome PI, and will have to do the majority of the Fellowship application, and perhaps even some of the data collection and analysis, in your own time – in the evenings and weekends. There is a growing push from Universities to give post docs more independence with their research and strict quotas for time allowed away from the bench which might help a little. Even with these changing times, it is still especially hard to get your first Fellowship.

**Further inspirational reading**

Advice to a young Scientists P.B. Medawar

Avoid Boring People, James Watson

Writing in the Sciences, Stanford online course (free!)
Behind the scenes - How a fellowship is reviewed presented and ranked

Understand the evaluation process and the people evaluating your application. By doing this you can tailor your proposal to avoid the chopping block at each stage and rank highly amongst your competitors. The very first stage is a simple check, by an administrator, that you meet the eligibility criteria: are not over the word limit or have gone over the maximum value that you can claim. Then your application will sent out to up to four expert reviewers. Next, normally two, non-expert, panel members will read your application and, together with the expert reviews, evaluate it. These two panel members will have about 5-10 minutes to present your application at a large panel meeting of about 20 people – all of whom will be even more non-experts than your two presenting panel members. If it ranks high enough you get the fellowship or the opportunity to prove yourself through an interview.

The expert reviewer

The expert reviewer will be someone in your immediate field. You will probably have the chance to recommend people to review your grant as part of the application process but they will almost certainly send it to at least one person not on your preferred reviewers list. You might decide to deliberately leave an obvious favourable reviewer off your list in the hope that, together with the keywords you supply, they pick her or him, but I’m not sure if this strategizing is going over the top, like a game of thrones plot. The expert reviewer will fill out key sections with guidance from the funder. Obviously in an ideal scenario you know exactly what guidance is given to the reviewer but you can get a very good idea by looking at the Fellowship scheme notes. One very typical question is ‘how does the application fulfil the Fellowship criteria laid out in the scheme notes?’ The other sections that they fill out are generally to do with: the scientific proposal, applicant’s background, host institution and costings. At the end they will rank your proposal. The six catagories of UKRI are: unfundable, fundable, good, very good, excellent, outstanding. It is hard to tell, but I get the impression that anything below excellent will probably mean you won’t get the Fellowship. It is possible to exclude certain researchers that you think would be biased in their evaluation of your work – and certain funders will request a specific reason to do so. What you won’t be able to do is exclude most of the field because you think they are all biased. If you think this is the case you need to spend a great deal of effort networking to convince key players in your field that your ideas that you intend to submit in your fellowship application have merit.

The ‘expert’ panel member and other panel members

The ‘expert’ panel member presenting your application at the panel meeting will be a non-expert and will rely on the evaluation of the expert reviewer. For some funders you can peruse the panel members and play the ‘guess who is closest to my research area’ game. I study mechanotransduction in auditory nerve cells. The closest panel member I found, for one fellowship, studied central processing of vision! For this reason you need to target your proposal not only at your expert reviewer but at your non-expert panel member. In this respect it is better to underestimate their expertise in your area. The panel member will spend 1-3 hours evaluating your entire application and the three, or so, expert reviewer comments. This is a lot of work and anything you can do to make their job easier will be much appreciated by them, like making it an easy read. The day before the panel meeting and perhaps a week after they last read your application they may quickly read your abstract and skim through it to remind themselves what they are presenting at the panel meeting. During the panel meeting your two ‘expert’ panel members will then spend 5-10 minutes explaining your proposal and why they think it should rank highly or not. The other 18 panel members then have the opportunity to comment on aspects of the application but typically all they will have time to do is read the abstract
and skim through specific sections of the proposal. From the moment that your panel member introduces your work till the moment it gets initially ranked will be no more than 20 minutes.

**The interview**

Nearly all larger Fellowships require an interview. At this stage about half the people that get through to interview will get the fellowship and half not, so if you are going to put some extra effort in at any stage now is the time to do it. Here, the interviewers are looking to establish if you are the type of fellow that they wish to fund. This will span from a two minute oral-only presentation followed by questions to a 15 minute power point presentation followed by questions. I have a section devoted to the interview.

**Feedback**

Few, but the brightest stars, get the first Fellowship they apply for. If you fail this is not time wasted, especially if your proposal got through for expert review because you will get their more extensive critical comments back. This can hurt emotionally. After all you gave birth to the Aims of your Fellowship application, nutured its growth, attended to it every evening and then waved it goodbye into the submission portal. But don’t get disheartened. You should take on board their criticisms for your next Fellowship submission. If reviewer 1 says you need more preliminary data, then collect it; if reviewer 2 says he does not understand how Objective 3.2 will work, then explain it better; if reviewer 3 says that you show no leadership then go on a leadership course. If you always update your application based on their comments, your proposal will get better each time you submit it. If you do this it is not a matter of *if* you will get a Fellowship but *when*. 
The narrative

The narrative (also known as track record) is a short personal history of your research journey. In essence you are selling yourself to the funder and, as such, it is key to tie in your education, experience and training to your research proposal. This is distinctly different from a CV and to ram this point home, and get you thinking in the right frame of mind, I have deliberately called it a ‘narrative’. The expert reviewer reading and evaluating, and the panel member presenting your proposal at the moment of judgement, will remember it better if it is a logical and captivating story then a list of achievements and placements. In this narrative you will need to spell out early on what your field or particular interest is (perhaps in bold) so that a panel member can quickly remind themselves who you are and what your fellowship proposal is all about.

Understand what the funder wants in a Fellow

Before you write anything you should, very diligently, go through the Fellowship criteria and highlight key words. The reviewer will also be looking at these same criteria when they judge your applications so use them in the narrative. I normally print these words out and hang them beside my computer screen to constantly remind me what the narrative should achieve. It is also worth a perusal of their webpage to understand the main goal of the organisation so that you can tie in your narrative with their vision. For instance, if the slogan of your funder is ‘science for the future’ then you might consider mentioning the cutting edge future-looking nature of your proposal.

Tie in passion with action

A Fellowship is a very personal award, and so the narrative is one very distinct feature of Fellowship applications over grant applications. The funders are not only looking for an exciting and novel research proposal, which can be enough for a successful grant application, but an ambitious and competent young researcher that will execute it. When your PhD, industry placement or post doc position was chosen it was probably not so that you would have the education, experience and skills necessary for this exact fellowship application; the narrative, however, should read exactly like this. For this reason you should make it very clear how each qualification, training period and placement equips you to undertake the research proposal. Display your wares; advertise your accomplishments: publications, degrees, training, awards, supervision of students, training courses. The person judging your proposal will have to justify why they judged it the way they did. Make it easy for them to give you a positive evaluation. If the reviewer has to struggle to find the evidence for your potential they might either miss it or grow annoyed that it took them so long to find it. The narrative is also an ideal place to get your over-boiling passion for your research and your proposal. But it is not simply good enough to say that you are ‘passionate’, driven’ or ‘excited’ because every applicant will claim this. Instead you need to evidence your passion with action: ‘To fuel my fascination with gene X I moved to the world-renown lab that discovered it’. Or ‘to equip myself with the methodology to answer this intriguing question I migrated to lab X’.

Use a lot of spin

By spin I mean phrasing your accomplishments in the best possible light. Now is not the time to be modest. Try to avoid boring passive words. For instance, ‘I was involved in a project that...’ sounds like you just did what someone told you. Instead write. ‘I led a project that...’ This sounds much better and will hopefully make the reader think of you as more of a future leader than a cog in the machine of your current lab. Training and career development is a very important requirement of fellowships. So instead of writing ‘During my PhD I learnt...’ write ‘During my PhD I was trained in...’ Highlight your
competitive nature and the competitive nature of your career stage. ‘I won equipment funding.’ Sounds better than ‘I obtained equipment funding’.

Highlight significant achievements or important statements in bold. This way when people come to skim read your narrative they will be drawn to these statements that will remind them who you are and what great things you have accomplished. Don’t highlight any more than one sentence per paragraph otherwise the effect is lost.

**Timing and momentum**

Why are you applying for this Fellowship now? Although your introduction of your research proposal will be able to cover this in more detail, you need to give a sense of urgency and timeliness. A bit like a salesman that tries to close a sale there and then. For this you need to identify the gap in knowledge or something which is holding the field back. Once you have solved this it will lead to a significant advancement in your field. Phrases such as ‘...to accelerate these insights at an important point in my career I will unravel how X works...’ or ‘...I will capitalise on X to push this field forward at a critical time...’.

For early career Fellowships they are not looking, or expecting, the finished article. Was is important is a clear upward trajectory that, given this extra support of the Fellowship, will accelerate you forward. Try to paint a picture of everything coming to a head – the stars aligning - for this Fellowship application.

**Future work**

Towards the end of your narrative, normally in the last paragraph, you need to give a compelling and convincing vision for future work. The funder wants to know that this Fellowship will act as a springboard to even greater things. Depending on the funder, this will be stated in the aims of the scheme. The BBSRC early career fellowship for instance has phrases such as ‘...successful candidates are expected to become future leaders in their chosen field’. Even if you do not know, or are not certain, what your next stage is you need to write something convincing. You are, of course, not held to account for not following this route years down the line so you are allowed some artistic licence. Again make it easy for the reviewer to tick this box by using wording of the Fellowship criteria. For instance, for the above BBSRC criteria you might say ‘This Fellowship will allow me to make significant advances that will allow me to lead the field beyond the Fellowship period’.

**Useful phrases to be adapted for your needs**

- My ambition was (and still is) to understand X, which requires X methodology to be implemented in X model system.
- I then moved to X’s lab in Berlin, with the explicit goal of bringing my recently acquired X methodology to X model system.
- This symposium/invited presentation/oral presentation promoted future work in cancer research and disseminated my latest work to current and future leaders in the field at an important point in my career.
- In order to pioneer this work I moved to/ was awarded/ trained in
- These recordings, on which this fellowship is based, are absolutely essential to significantly advance our understanding of insect vision.
- Obtaining a X fellowship will lead to a guaranteed permanent position at the University of X (or whatever you have secured from your institution) and the opportunity to make substantial advances beyond the fellowship period.
The research proposal

The research proposal is the real meat and bones of your fellowship application and it is where you will (or certainly should) spend the majority of your time. The length of the proposal will vary greatly between funder, from the two pages allowed by the Leverhulme Trust to fifteen pages of the European Research Council. With two pages you can provide little more than a brief introduction, list your experiments and say why it is worth doing. With a fifteen page proposal you can give a more detailed account of the technicality of the experiments, ground your work thoroughly in the literature and detail exactly how this will move your field forward. If this is the first time you have written a research proposal this chapter should provide some useful pointers. Even if you are more experienced at writing research proposals I would still strongly encourage the following: get anyone and everyone that you can to read and provide critical feedback, make sexy figures and underestimate the expertise of the reviewer.

Opening paragraph and introduction

Grab the attention of the reviewer or panel member with a punchy short paragraph explaining why your work is so important and timely. Put yourself in the shoes of the panel member that has to review your Fellowship application. They have 19 other Fellowship applications to read and a limited time to do it. Why should they pick up your one? Why should they remember your one over all the others? This is a highly competitive situation - you might well need to be in the top two of the 20 proposals sitting in front of them to get the funding! By writing a compelling short paragraph – a foot in the door - you will hopefully captivate the attention of your reviewer and compel them to read on and remember it.

Next introduce the relevant background. By relevant I mean that necessary to understand the concepts and importance of your Aims. If you don’t know what is relevant, experiment by deleting information in the background. Without it can the rest of your proposal be understood? Use the introduction to identify and highlight crucial gaps in knowledge then link each Aim to these gaps For instance, at the end of a paragraph of the introduction it might read ‘...Our lack of a neurological understanding of Post Traumatic Stress Disorders severely obscures our understanding of this complex disorder and hinders the development of any treatment. **Aim 1 will characterise the role of neurotransmitter X in PTSD and test if neurotransmitter X is a viable treatment pathway.** If this is the first time of introducing your Aims it may be a good idea to put them in bold and label them such that they can be easily found in the Aims and Methodology section (as the example above shows). Never beat around the bush with your writing style; be direct. For instance, the example above could have read ‘Aim 1 seeks to characterise the potential role of neurotransmitter X ...’. ‘Aim 1 will characterise the role of...’ is more confident, straight forward and uses less words from your limited word count. Don’t spend much more than a quarter of your space with the introduction, save your words for the important information - what you will be doing during the Fellowship.

What’s the difference between Aims and Objectives? Aims are the question you are trying to solve (there are typically 3-5 in a research proposal) and objectives are the specific actions, or experiments you undertake to achieve those aims. The aim of James Watson and Francis Crick Franklin was to elucidate DNAs structure. The objectives would have been to 1. Get X-ray diffraction patterns of DNA’s structure. 2. Build a model. 3. Confirm model against X-ray diffraction patterns.
Aims and Methodology

The next section is the detail of the experiments. A typical layout would be three Aims having, maybe, up to six Objectives – specific experiments that all together fulfil that Aim. All the Aims should, together, solve a significant question in your research field and be more than the sum of its parts (see section below).

There is not one way to write this section but, however you do it, you should make it explicitly clear the significance of each Aim. What will be known after this Aim is accomplished and how will this move your field on? What is its game-changing nature? Also link back to the Aims highlighted in your introduction and use the exact same wording. For instance, your Aim 1 section should read:

Aim 1 Characterise the role of neurotransmitter X in PTSD and test if neurotransmitter X is a viable treatment pathway.

This really helps the reviewer and panel member link between the sections of your research proposal. Use a simple numbering system. For instance your Objectives in Aim 1 could be Objective 1.1, 1.2 and 1.3 or 1.A, 1.B, 1.C and should be titled to make each Objective clear:

1.1 Localise neurotransmitter X in the rat brain

This gives a clear structure so that your proposal is easy to navigate. Start each Objective by writing what the Objective will do and make sure to incorporate how this will benefit the field or update the understanding. Again this might be obvious to you how this updates current knowledge but it may not be so obvious for your expert reviewer and even less so for your non expert panel member. You need to make clear how this work will impact the field. For instance, for the above Objective you might say. ‘Multiple recent publications (refs) have highlighted the critical role of neurotransmitter X in PTSD but have yet to localise it to specific brain regions. My precise staining is timely as it will give a 3D map of neurotransmitter X expression which will enable the field to, not only, develop further hypotheses but to finally test them by targeting specific brain regions.’

Make sexy figures

Figures are so important for a successful research proposal; they do so much. They present essential preliminary data which highlights your competence to carry out the work and the feasibility of the proposal. They help explain concepts. They (should) make the proposal look aesthetically pleasing. They save space and reduce the need for words. They break up the text. Really spend time on your figures; just as you would for a publication. Strive to make them understandable just by looking at them, as opposed to having to decipher the footnotes. For some Fellowships, the word count doesn’t include figure footnotes, so you could add extra written information in the footnotes. Beware that for some Fellowships they might print your manuscript only in grey scale so make sure different colours also have different shades.

If you have a complex and longwinded protocol that you need to explain then instead of using half a page of text make a sexy figure. After feedback from a colleague that ‘blimey that’s a lot of text to explain CRISPR-Cas9’ a somewhat complicated genetic technique, I simply consolidated this text into a sexy figure. Below is the text and the figure that replaced it. I hope you agree that the figure is a lot easier on the eye but still gives a good overview the technique.
The guide RNA necessary for specific targeting of the Cas9 endonuclease will be designed using Geneious software. Geneious will also be used to identify and limit off target effects (the genome is in the final stages of being compiled). I will design two guide RNAs per gene and target the 5' end of the coding region to increase the likelihood of a frameshift mutation resulting in a knockout. To synthesise a single guide RNA (sgRNA) I will anneal forward and reverse oligonucleotides, complementary for the target site, and clone them into the pDR274 plasmid. I will transcribe the sgRNA and Cas9-coding mRNA from my pDR274 plasmid constructs and from pCMV-Cas9 plasmids respectively using the mMESSAGE mMACHINE kit (Thermo Fisher) and clean with a DNase treatment (Turbo DNase, Thermo Fisher). The guide RNA and Cas9-coding mRNA will be injected into embryos (at concentrations of 150 and 300 ng/μl) within 48 h of laying. I will use the relatively quick and simple T7 endonuclease I assay as a first screen to assess the targeting of the Cas9 endonuclease in mature eggs. To sequence the exact mutation in locusts I will extract 1 μl of haemolymph from 3rd instar nymphs and use primers to anneal 100-250 base pairs either side of the double stranded break to amplify the corresponding region. These PCR products and their allelic mutations will be sequenced (by GATC). First generation (G0) locusts, with correct insertion/deletion mutations (i.e. those that cause a frameshift and knockout of the gene), will be crossed with wild type locusts to obtain heterozygous G1 lines. The G1 lines will be in-crossed to obtain homozygous mutant locusts.

**Preliminary data**

Preliminary data is absolutely essential for a successful research proposal. By putting it into the research proposal you have left no doubt in the reviewers mind that what you propose is possible and that you are competent. It is a bit of a balancing act, however, as you may want to show an example recording to show its feasible but perhaps not a whole body of data which looks like you have already done all the work. I would recommend some preliminary data for most of your Aims if you have a large
fellowship proposal. If you have a short two page proposal, obviously there will might only be room for one piece of preliminary data, so make it count.

**Summary**

The first paragraph of your research proposal should get the reader engaged and excited. The last paragraph should summarise your Aims and end on a significant statement such as, ‘this work will provide a significant and timely development in the field of immunology’. Finish strong.

**Risk statements**

I get the feeling that a good majority of experiments now days present a lot of risk. And this may well be because all the low-hanging experimental fruit has already been plucked, so to get an advancement in knowledge requires a lot more time treading that fine line between what is possible and not.

My major downfall when first applying for early career fellowships was my misunderstanding of what the funder meant, and wanted, by ‘risky research’ or ‘high risk-high gain’ research. Risk by definition is doing something, such as tricky experiments, which stand a large change of failure. In my naivety I thought, ‘You want some risk? Here you go!’ and I made two of my four aims very risky with a high chance of them not working. After getting multiple rejections which stated ‘this is very risky’ I realised this is not what they meant by risk, or at least this is not how I should make my research proposal risky. Each of the four, or so, aims should be very feasible with little risk. The risk should come from avenues or Objectives complementary to your aims. You should make sure that if these risky Objectives fail you will still achieve your Aims. If you pull it off this risky tangential Objective, however, will make some ground breaking super-high-gain insight. And this is exactly how it should be sold in the research proposal.

Because you are an expert in what you do you know how risky or easy experiments are but don’t assume that the expert reviewer, much less the panel member, will know. Put yourself in the shoes of your expert reviewer. If they can’t do double intracellular recordings from a single neuron, and no one else has, they might well write that that Objective, that is key to that aim, has high risk. At the end of each Objective really spell out the risk of each objective with a risk statement: ‘I have experience of dual intracellular recordings from single neurons therefore I consider this objective low risk’. If you do have a higher risk objective; obviously one which should not affect the success of the Aim (see paragraph above), be honest and write ‘I consider this the most risky objective of this proposal’. But then put a good spin on it by adding ‘but the high risk is justified by the high reward.’

**Serial dependency and more than the sum of its parts**

If Aims 2, 3 and 4 depend on the success of Aim 1 then you have the worst case of serial dependency – especially if Aim 1 is risky. Your research proposal will none-the-less need to link together to have more impact than any of the Aims alone and will need to be interlinked as such. You can think of that Aim1 + Aim2 =2 but it should be that Aim1+Aim2=3. As an example, you could try to understand the position of rabbits in a field through studying where the lush grass that they feed on grows. Or you could try to understand rabbit position based on where a predator is likely to be hiding. Only by studying both together will you likely form a complete understanding of rabbit position.

**Get help**

Recruit anyone and everyone to provide feedback on your research proposal. I sent my proposal to 14 different people and my proposal was made better by each and every one of them. If asking colleagues with no experience of reviewing grants politely request that they simply highlight anything they didn’t
understand. People can get so self-involved and non-objective with their research proposal that it can no longer be objective. You will, of course, understand your own proposal – you wrote it! If you only rely on the feedback of one person they can only read it for the first time once. The more people that read your proposal the more first reads you will get. It will be the first time the reviewer or panel member (who judges it) reads it and they will appreciate it if they understand it on first read.

The most use will be your PI or colleagues that will hopefully give you extensive feedback. But you should not stop there. I kindly asked other science friends or science friends of friends. I got my Mum to read through for typos and other grammatical errors. Even my not-so-academic little Sister gave me useful feedback; ‘I don’t even understand the first sentence!’ she cried. I subsequently changed the first sentence such that anyone could understand it – I wouldn’t want my presenting panel member to have to google something before they had got to the end of the first sentence.

**Workplan**

There might be a separate section or allocation for the work plan, if not I would strongly suggest putting some graphic workplan which displays the sequence of your work through the Fellowship period. This gives the appearance that you have thought about the timescales of each Aim or Objective and makes your ideas more real and saves crucial space: you don’t need to write for each objective: ‘Objective 1.3 will take 6 months and will be conducted parallel to objective 2.3.’ as all this information is captured by the workplan. If you are applying for a Fellowship where you employ other researchers you can make it very clear what experiments you will undertake and what the PhD student will undertake. You can also highlight strategically-timed training, meetings that you will attend or submission of publications resulting from your work. If done right, it will give the impression that you have thought long, hard and seriously about how all this work, training and research outputs will fit into the Fellowship period. Below is an example of a workplan of a very short Fellowship application where there is not much room and below a one page workplan allowed by some larger Fellowships.
Extensive workplan

Other advice

Make you proposal easy to skim read by using bold to highlight important statements. Although the panel member presenting you work should (but may not have!) spent an hour reading your entire proposal, that may have been two weeks ago. Now, the day before they are due to present your proposal they will spend a quick 10 minutes to remind themselves what it was all about. So make this easy for them.

Be obsessive over your research proposal and put the majority of your effort into it. It can always be made better. I would consider it strange not to have at least 20 iterations of your research proposal. I got in the habit of printing my proposal out at the end of each evening. For some reason the research proposal would seem more real on paper; I could spot mistakes or think of improvements more effectively. I would ritually read it and write revisions on it in the bath with a beer. I would always have a copy in my pocket, like a flour baby, to read on train journeys, at the pub during half time rugby and during lectures that failed to capture my interest (out of sight of the speaker of course!).
The Host Institution

You can breakdown a Fellowship application into three main components that will be evaluated: the applicant, the research proposal and the suitability of the host institution. The first relies on publications and accolades you have won, the second on your ideas and the evaluation of those ideas by your reviewers and the third, your host institution, on the face of it, is the one you have the most control over. It is simply determined by your flexibility to move to the most appropriate place to carry out your research. For this reason it should be an easy win. It looks best if the only reason you move is to benefit from the world leading lab and researchers for your particular research area. It is irrelevant for the Fellowship application that you like where this new lab is. But we are humans and we have feelings. Do you want to live in this or that country, or that particular city and do you even like the PI? If you have a family or a partner, who already has a job then this may restrict your options further. You don’t have to move at all or course but this will only work if: 1. you have already moved lab since your PhD and 2. you can make a strong case that staying where you are now is the best place for your research. Under no circumstance should you stay in the same lab or University of your PhD supervisor! I’m sure that your PhD supervisor would love you to bring in your own salary for the next three years and so they might, in their naivety, encourage this but this is a red flag. It is incredibly hard to say you are independent and will learn new techniques if you remain in the same research environment as where your PhD was completed or where you have been for the last five years.

First contact

So you have identified a lab that you would like be your host institution. You probably have already interacted with them at a conference. Or you might have not had any interaction with your hopeful Host Institution. Either way I would strongly suggest a visit to their lab at their earliest opportunity. If you have not had any interaction with your hopeful Host Institution it is perfectly fine to contact the PI of the lab explaining why you are interested in their work, that you would like to visit their lab, perhaps give a talk and that you are thinking about applying for Fellowships. Yours Sincerely. Such a scenario is win-win for the host lab; they get a driven researcher at their lab for no (or minimal) cost. If they have any sense they will embrace this opportunity with open arms. The reason I would visit the lab is to make sure that you can work and get along with the PI. Obviously you should get a good sense of this by talking to the PI. An even better way to get insight to lab life and the PI is to ask the post docs or later-stage PhD students - in the absence of the PI of course. Try to push, or at least accept, a visit to the bar after your visit. You are more likely to get an honest overview of the lab and PI from an intoxicated post doc in the informal surrounding of a bar than when they have all their senses and in ear-shot of the PI. If you are torn between two labs you could visit both but be honest and explain that you are visiting another lab with the same intention. This is a good strategy; if you have a choice you will choose the best option.

Must I move?

If you move lab you will leave little doubt in the reviewers’ or panel members’ minds that you are moving for the benefit of your research. If you stay where you are, a likely reason is that you are comfortable there or perhaps settled. Unless there is some very special reason to stay put I would seriously consider moving lab, including to another country. If you move as far as another country there is an added benefit: the success rate of Fellowships is higher, I guess because not everyone is willing to move country, and these international ‘incoming’ fellowships are less competitive. For instance, the success rate for the German Alexander von Humboldt Postdoctoral Research Fellowship is 33% whereas other comparable fellowships in the UK for people who are already resident is typically not higher than 10%. Most countries will have specific Fellowships for early career researchers that
are not nationals of that country. They often have added benefits, such as sponsored language courses, support for spouses and moving costs. On a personal note I had the best years of my life working in another country and for this reason I would consider moving to another country a wondrous opportunity to sample different cultures and lab environments around the world and, if need be, learn a language, not a burden to be endured.

**What help can your future host institution offer you when writing your proposal?**

You should leverage all the help that your host institution can offer. Don’t accept some last minute feedback by your future PI via email. If successful, you are highly beneficial for the lab so don’t be afraid to impose yourself – especially if this is the first time applying for a Fellowship because you will need all the help you can get. The amount that you can expect from your host institution depends on the value of the Fellowship you are applying for and the funder stipulations of the expected contributions of the host institution. For the BBSRC David Phillips fellowship the host institution must make a ‘significant contribution’ to the Fellow. If a ‘significant contribution’ is not made the BBSRC make it clear that your proposal will not be competitive, and not funded. There is little excuse for your host institution not making commitments. From their point of view it’s like betting on a horse but only paying for the bet if the horse wins. For a Fellowship worth 1 million, I would expect equipment funding, a PhD student and or perhaps a technician. You might be able to push for the holy grail – a permanent position at the end of your Fellowship placement but this will be exceptional. For shorter and less extravagant Fellowship that covers your salary for two years you will be lucky to get much more then help writing the proposal but there is no harm in having a frank discussion with your host PI about what they can offer.

If this is the first time writing a research proposal I would strongly push to meet up with your PI and visit for a week or two to work solely on the proposal. If you are lucky the PI might offer to cover your accommodation during this period or they might have cheap student accommodation on site.

For larger Fellowships you will need to do costings, impact statements, academic beneficiaries and other obscure documents. For these you can use the finance administrators, research officers and other research support personnel in your host institution. Ask your host PI who these people are and make sure you learn from their expertise.

**Host Institution Justification**

For any Fellowship application you will have to justify your choice of host institution. Although this is also the case for grants it weighs more heavily for Fellowships. This is because a big part of Fellowships, mainly targeted at young researchers, is training, career development and building up experience. You should have picked a host institution because it benefits you and your line of research so you will already be well aware of why you chose it. Now you need to convince the people reviewing your application that this truly is the best place for your research and for your career development. Find out what is unique about your host institution. It might be the PI herself, the research facilities, the research environment (i.e. if you are studying ear implants and you are in the inner ear institute that leads the field), other prominent researchers with closely aligned interests, a custom Early Career Development Programme run by the University. The host institution PI is a good starting point to see what they can offer in this respect. She or he will know the institution and the people within it best. The University’s website is also a source of information.

When writing the host institution justification use concrete examples of names of things. For instance don’t say ‘I will attend a career development course.’. Instead write ‘In year 1 I will attend the Leadership Course run as part of the Career Development Programme by the College of Science and
Engineering.’ By giving a name and when you will do this makes it seem real; like you are serious about doing it as opposed to a wish and a whim.

Likewise give names of experts in your department and, even better, detail how they will contribute to your research and training. Obtain Letters of Support from them if you plan to work closely with them.

Paint a picture of a nurturing, busy and exciting research environment using explicit examples: departmental seminars with external speakers, training courses, lecture series, facilities, outreach events etc...
Costings

Costings will not win you a Fellowship but they might make the difference if you are sitting on the borderline of being funded and, if done particularly badly, might cost you a Fellowship. Costings may not apply for some Fellowships but, for the reason above, it is worth giving them due attention if it does. Costings take time because you have to get (sometimes multiple) quotes from your suppliers and interact with finance administrators at your host institution. To top it off, if your scientific proposal changes, as they will inevitably do, so will your costings. For instance, if, based on feedback from your peers, you decide that Objective 1.4 requires a dual intracellular amplifier not a single one, you need to get a new quote from your supplier. Further complicating matters, you need at least three quotes from three different suppliers for equipment over £10k, because, for example, your University stipulates that in its procurement terms. It may be tempting, therefore, to do the costings just before submitting them, but this is unwise as you could be waiting on a quote 24 hours before the submission deadline, from one of your suppliers who is out of the office or doesn’t consider it their priority.

Get quotes

You will need quotes as, very annoyingly, most suppliers do not display their prices on the internet. If you are buying more expensive services or equipment a representative from your supplier will probably want to meet you in person at your work place. This is a good opportunity to give the supplier a good hearty grilling about why their product or service is better than their competitors and hopefully advance your technical/methodological knowledge – after all they are (or at least should be) experts in how their technique or equipment works. It will also allow you to develop a relationship with you supplier, so that when you ask for a 15% discount you need, they are more likely to give it to you and more importantly go out of their way to get it to you quickly.

Develop relationships with the finance administrators at your host institution

The financial regulations of your host institution and your Fellowship funder may be banal to you and not interesting – the antithesis of your research - but there are dedicated finance administrators that do this exact work day in day out. You will need to obtain quotes and have a rough idea of what personnel, if any, you can afford but they can use all this information to do a costing and give you the precious figures that need to be entered into the online submission portal. Make sure to arrange a meeting with your finance administrator as soon as you have 90% of the information necessary, such as quotes and time of other personnel required. At this stage you will be able to estimate how much money you have left or, more realistically, how much needs to be cut. The unforeseen costs, the most ambiguous of which are indirect costs, depend on your institution and your funder vary widely.

Tactics if funds are tight

For some Fellowships funds may be tight. The first port of call is your University, which for most expensive equipment items over a certain amount (normally £10k), are required to pay matched, 50% funding. But you can try and leverage a little more by requesting 60% funding. After all if you don’t get the Fellowship they don’t have to pay out – they can bet but only pay if they win. Secondly if they refuse you have lost nothing. You can also lump multiple items under £10k into one, getting 50% contribution for items you would otherwise not. The other obvious target are your equipment suppliers. I would consider a 10% reduction on any standard price a given. To get this minimum or to push them down further it is best to get quotes off their competitors and send your quotes to them as proof. As an early career researcher they have an added emphasis to collar your business early in your career so that you stick with them for the rest of your career. You can hint at this when you correspond with them.
What do you find easier to ignore? An email from an University administrator requesting you spend 5 minutes to fill out a survey or a phone call from them? Now put yourself in the shoes of your supplier. They are more likely to give you that discount if you ring them and explain that with your limited budget ‘I can only afford £5,000 for that centrifuge’. Then put them on the spot and ask ‘Is there any way you can help me afford it?’

Second hand suppliers such as LabX and Amazon might also be worth buying from. Or at least getting quotes from to threaten other suppliers unwilling to budge. The only issue with these second hand suppliers might be no guarantee.

Further advice

Lots of 000s seem suspicious, unless for a single equipment purchase. When someone lists: laboratory plastic ware £15,000, it looks as though the applicant has plucked this number out of thin air. I would try to calculate everything you will need to perform the research, which your host lab doesn’t already have. If you don’t have the time to do this at least write: laboratory plastic ware £15,016, because it looks like you have.
Uploading and submitting

Whatever you do, do not log in and upload your application hours (or even days) before the submission deadline. What happens if you forget your login details or that magical ‘submit’ button remains greyed out? Well, I’ll tell you – you’re screwed! Although the scheme help text should list and detail the sections that need to be completed, do not rely on it. Login soon after the online application becomes available and go through all the sections. Funders for some reason, that still eludes me, like to throw a couple of surprises in the online form. These can be as large as a section titled ‘Explain your reason for applying for this Fellowship in 1000 words’ that was not detailed in their help text or the revelation that your host institution justification is word limited to 350 words. Such surprises are not confined to you, however. Some funders require the person writing your reference to log in and submit their reference. One kind former Professor had written a lovely long reference only to find out, after trying to submit, that he only had 500 words to do it. Upload all your files at least a week before the submission deadline and get your administrators, especially your financial administrators to check them. As you do more revisions you can simply update what you uploaded. For some applications you can print off your entire application once everything is uploaded, so you will be able to look at it just like your reviewers.

Clicking the submit button does not mean your application is submitted. It will always have to be approved by someone at your host institution – also before the deadline. For this reason make sure you know who is responsible for clicking the final submission button. Know their name, email and telephone number and, even, who would take their place if they were to be ill that day. Phone them up and talk to them, tell them when you plan to submit and ask if they are due to be in that day. Many funders suggest submission 24 hours before the submission deadline, and for good reason. Their server may slow right down in the hours before the deadline and the last minute checks by your institutional approver will take time.