How to write a winning F31-style fellowship proposal

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[These slides were presented in a highly interactive session at CABTRAC 2019 (annual meeting of the Cancer Biology Training Consortium) that followed and complemented a presentation from Mark Damico, NCI. Whereas Dr Damico focused mainly on describing and clarifying the formal NCI instructions, we focused on providing some informal, practical advice that was not necessarily obvious from the official instructions. This is not a complete guide, but it’s a start. Questions/comments? adrienne_cox@med.unc.edu]
Five global points for writing anything

1. Write for the reader, rather than for yourself – why should they care? How will they understand your intent?
2. It will take you WAAAY longer than you think
3. Read the instructions!
4. Pick the brains of successful writers (applicants/mentors)
5. Pay attention to detail: format, layout, spelling... would YOU want to read it?
F31: why your research plan is NOT the key

“A good research plan is great, but a good training plan is better”
- Mark W. Damico, NCI

Fellowships are all about training YOU, the candidate, to enhance your future independent research career
In order of importance

∵ Candidate (YOU)
∵ Training plan
∵ Mentor
∵ Research plan
∵ Environment

Therefore, spending effort on all the “other stuff”, including letters of recommendation - not just the research plan - is crucial

Your mentor will be blamed for a weak training plan, AND for a weak research plan even though you wrote it – communicate, and allow plenty of time for iterative feedback
Questions, comments, suggestions?
Help reviewers see your potential

- Brag, even if it feels uncomfortable!
- Describe your previous experience from the perspective of science as well as technical approaches
- Describe your proposed experience from the perspective of science as well as technical approaches
- Use conventional language and layout; study examples of successful proposals
Your personal statement: where have you been already and why will you be successful now?

- Brag again, even if it feels uncomfortable
- Address the specifics of your proposed studies
- Describe anything unusual in your background and/or current environment that makes you especially suited to the proposed work
- Show enthusiasm!
- Be sure to address your long-term career goals and how this proposal will help you achieve them (*these studies will provide me with strong expertise in XX to complement my experience in YY and thereby position me well for an independent career in _____*)
Your training plan must be customized for YOU

- What are your career goals?
- How will the training plan build on your strengths (she already has experience in X, and this training in Y will complement that skill)?
- How will the training plan address your weaknesses (to improve his writing, he will take 2 writing workshops starting this fall)?
- Must sound like it has been written by your mentor, even if you drafted/wrote it for him/her
- Make sure the training plan is consistent with other parts of your proposal
- Make sure the training plan doesn’t misidentify you in any way (cut/paste wrong name, wrong gender, etc.)
When to get a co-mentor

- Your main sponsor doesn’t have a track record of graduating PhD students – early days, mostly postdoc lab, etc.
- Your main sponsor doesn’t have R01-equivalent funding that clearly extends through your training period
- Your research plan requires scientific expertise that is not a strength of your thesis lab

- Make sure that the co-mentor actually contributes noticeably to the planning and writeup of the training plan and evaluation of your potential
- Clarify how the co-mentor will interact with your mentor as well as with you
The importance of letters of recommendation

- Reviewers weigh these heavily in determining your potential.
- Letters can and should be used both to emphasize your strengths AND mitigate any potential weaknesses (s/he admittedly didn’t have the best undergrad grades due to [health/family difficulties/late bloomer] but is now doing splendidly in grad-level coursework).
- A lukewarm letter is worse than no letter!
Who should you ask for letters of rec.?

- Writers should have credibility in being able to evaluate you, i.e., knowledge of your scholarly/research efforts and potential
- Sometimes, someone who can specifically address a potential weakness (member of admissions committee that evaluated your UG GPA)
- Thesis/advisory committee members, DSGs, dept chairs, program directors, etc. are good; not someone already collaborating with you (ok if collaborating with your lab in general, but not on your specific project)
- Fancy stationery is desirable but not required
- Writers should have credibility in being able to evaluate you in comparison to others, so helps to have experience mentoring successful grad students, especially other F31 awardees
- Internal or external? Both fine, as long as they know AND THINK HIGHLY of you and your work/potential
How should you ask for letters of rec.?

- Ask early
- Ask not just for a letter but for a strong letter
- Give them a graceful way out (if you will not have time, I will understand, please let me know so I can ask someone else)
- Provide the deadline, and all the information they will need to submit the letter on your behalf (your eRA Commons name, the PA number, your last name as the Commons knows it if not obvious, etc.)
- Offer at least the title of your proposal, maybe a quick summary of your topic, and offer any other components that the writer may want. Highly variable – some want lots, others want nothing.
- Be prepared for some to ask you to draft a letter or bullet points. If you do this for multiple people, be sure that the drafts are completely distinct!
- Send polite reminders a week and 2 days ahead of the due date (thank you so much for writing a letter for me, just a reminder that the due date is XX at XX o’clock; here’s how)
Specific aims, research plan

- It’s a training fellowship, so sprinkle in some descriptions of how this new area of science and this new-to-you technique will help you achieve your career goals
Reviewer expectations for the research plan

- Your research plan should be feasible for YOU, not for an advanced postdoc in your lab ("overly ambitious" is a common reviewer kiss of death)

- **Always propose to test whether** your hypothesis is true or not; **never propose to prove that** a hypothesis is true

- Reviewers look for evidence of rigor (controls, stats), pitfalls/alternatives, and “why do we care?” (i.e., leads somewhere, future directions)
A word or two about strategy

- Can use the future directions section to get credit for having thought of something without actually proposing to do it (scope, feasibility, etc.)
- Remember that pitfalls can be scientific or technical (previously unknown info turns out to be important vs can’t get sufficient knockdown to achieve intended effect); you don’t always need to include both, but do consider separately which may be important for your aims and provide alternative directions / technical strategies accordingly
- Never say “here are the challenges, but I don’t expect them to be a problem” – always provide alternatives
Your turn!