

NCI Predoc to Postdoc Transition Award (F99/K00) RFA-CA-17-014

Michele McGuirl, Ph.D.
mcguirlma@mail.nih.gov
Center for Cancer Training

Use the NCI F99 Website and carefully read RFA-CA-17-004

cancer.gov/cct



The screenshot shows a navigation menu for the NCI F99 Award page. At the top is a dark blue header with the word "TRAINING" in white. Below this is a white box containing the text "Cancer Training at NCI" and a plus sign. Underneath is a light gray box with the heading "Funding for Cancer Training" in purple. A list of award types follows: "NCI F30 Award", "NCI F31 Award", "NCI F32 Award", and "NCI F33 Award". The "NCI F99 Award" option is highlighted with a dark blue arrow pointing to the right.

Resources

- [Program Announcement](#)
- [Transition Info/Forms](#)
- Informational Webinar held 12/13/2016 ([slides with transcript](#))
- [Answers to frequently asked questions](#)

Script for Slide 2

The script and slides from today's webinar will be added to the F99 website under Resources. A note about NIH-speak, for newcomers to the NIH system:

NCI is the National Cancer Institute, the oldest of the 27 institutes and centers that comprise the NIH.

FOA means Funding Opportunity Announcement. FOA is the generic “umbrella” term for all types of funding mechanisms offered by the NIH.

RFA means Request for Applications. The F99/K00 is an RFA. This means it has special terms – like having a Letter of Intent and only having one annual submission date.

NRSA refers to National Research Service Awards – these are the congressionally-mandated fellowships offered by NIH – the F30 is for MD/PhDs, the F31 is for graduate students, and the F32 is for postdocs. The F99/K00 is NOT an NRSA fellowship!

The NIH Fiscal Year (abbreviated FY) starts on October 1 and ends September 30.

Purpose of the NCI F99/K00

**An independent research career is being viewed
as a less viable career choice**

- **F99/K00 Goal: Identify and encourage outstanding graduate students to pursue cancer research careers as independent investigators**
- **Dual-phase Funding:**
 - **1-2 years of support for completing PhD dissertation (F99)**
 - **Up to 4 years of support for postdoctoral training (K00)**

The two phases are intended to be continuous in time

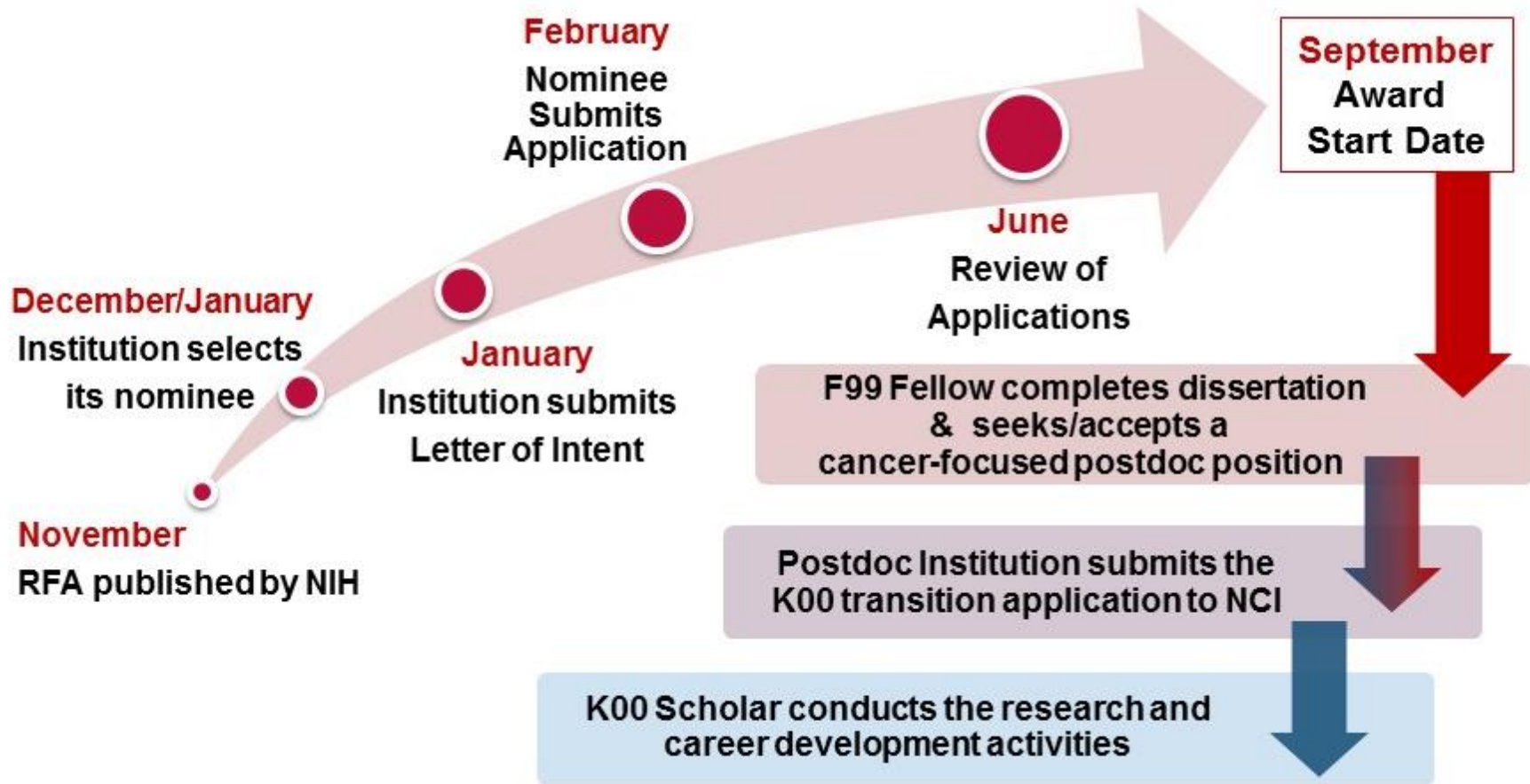
- **Transition when the dissertation research is complete**
- **Funding for the F99 phase will not be extended beyond 2 years**

Script for Slide 4

First, a bit of background information on why NCI is piloting this new funding program. Currently there is a significant imbalance between the numbers of biomedical trainees and the available tenure track positions. And there is an imbalance between the numbers of biomedical researchers and available research grants. One of the many consequences of this imbalance is that an independent research career is being viewed as a less viable career choice by some of our best graduate students.

The F99/K00 pilot program is an effort by the NCI leadership to explore innovative ideas to address this problem. NCI hopes that this dual-phase transition award will identify and encourage outstanding graduate students to commit to pursuing independent cancer research careers. More importantly we hope to show to the awardees and their peers that NCI supports a tractable career pathway for the talented and committed.

Timeline for the F99/K00



Script for Slide 6

NCI is committed to renew the F99/K00 for the next 3 years. The FY17 RFA has been fine-tuned from last year, so it's very important to read it carefully and not rely solely on experience with a prior year's announcement. Also, last year we were lenient with applications that did not follow the format specified in the RFA. This year, we will return non-compliant applications without review. If you know an awardee from last year and plan to model your application on theirs, keep this in mind!

1. This has one receipt date per year, not like the NRSA fellowships, which have 3.
2. Each institution manages its own nomination process to select its nominee, with the lead time needed to craft a solid proposal.
3. By January 17th, the institution's grants official, not the nominee, will submit a Letter of Intent. This helps to plan for the review and to prevent mix-ups about who the official nominee is.
4. Applications will be due February 17th. The NCI website has a page devoted to the F99/K00 that will be updated for each new RFA.

Script for Slide 6, continued

4. Review occurs in May/June and goes to the August Council. Applications are reviewed by a special emphasis panel at NCI.
5. Awards must have a start date of September 1, 2017.

What happens next, if you receive an F99/K00 award:

1. During the F99 phase: You have 2 years to complete your dissertation research and secure a **cancer-focused** postdoc position. In year 1, you come to an NCI F99 Fellows meeting.
2. NCI will not approve transitions to the K00 phase before Feb 1st of the first award year.
3. Contact your Program Director ~ 4 months before you are ready to graduate and move on, for advice on preparing the K00 transition application, which will be submitted by the postdoc institution. Details are in the RFA.
4. Then you graduate with your PhD, start your new postdoc position, and conduct the research and career development activities planned for the K00 phase, which gives you up to 4 years of support.

Letter of Intent

By 1/17/2017, Grants Official sends an email memo, indicating the institution's intent to submit an application to RFA-CA-17-014 to:

Michele McGuirl, Ph.D.

National Cancer Institute (NCI), Cancer Training Branch

Email: m McGuirlma@mail.nih.gov

- **The memo should include:**
 - **Likely title of the application**
 - **Name, address, and telephone number of the nominee **and email address!****
 - **Name of the primary sponsor/mentor**
 - **RFA number**

Script for Slide 9

The Letters of Intent come from the university grant officer, not the applicant/nominee. They are not technically required, but they are strongly recommended. First, they let me to contact you and make you aware of webinars like this one. Second, there have been several instances where more than one person from the same university believed he/she was the nominee. When I get LOIs, I can resolve conflicts like this before someone spends a lot of time writing an application. Finally, it helps us plan for review.

- If your university has not submitted a letter of intent yet, please ask them to do so as soon as a nominee is selected. It is a simple process – the grants official emails me the requested info, which can be found in the RFA, along with the nominee's email address.

Eligibility

Applicant must be nominated by a PhD-granting institution

- **Students earning PhD or other doctoral research degree**
 - **3rd or 4th year PhD students finishing up dissertation research**
- **One nominee per domestic, PhD-granting institution per year**
 - **identified by a single DUNS number or by multiple DUNS numbers for schools/colleges/divisions within the institution**
- **US citizens and international students**
- **Unsuccessful applicants may submit if eligible and re-nominated**
- **Current F31 awardees and applicants* are eligible**

Script for Slide 11

1. Who can apply? The intended applicants PhD or other research degree students (DrPH, ScD) who are 3rd or 4th year graduate students and are within 2 years of finishing their dissertations.
2. The program year is calculated from the time of initial enrollment and not after you start your dissertation project, join a lab, or pass a candidacy exam.
3. Dual-degree, or professional doctorate/clinical degree students are not eligible. This is because their training timeline is not compatible with this new funding mechanism.
4. There is only one nominee per degree-granting institution per year. One change from last year is that **there is one nominee for all schools/colleges/divisions in an institution, even if they have individual DUNS numbers.**

Script for Slide 11, continued

5. If you mainly work at a non-academic research center, you must apply through the institution that will confer your degree. But the research center can co-nominate you and contribute to the application
6. International students studying in the US who are here on a visa ARE eligible for the F99/K00.
 - No resubmissions are allowed but someone may be nominated two years in a row if the person still meets the eligibility requirements.

Frequently Asked Questions about Eligibility

- I am in my 5th year but...
- I am in my 2nd year but...
- I have an F31 under review – is that OK?
- I want to submit an F31 after the F99/K00 - is that OK?
- My dissertation research is in (_____) but I want to pursue cancer research for my postdoc...

Script for Slide 14

Are there exceptions to the eligibility rule? yes. Some examples are: Documented leaves of absence (for example, family leave but not a vacation). Or circumstances beyond your control (like a first advisor leaving the institution). But know that if you are selected, the **institutional nomination letter** will need to document these special circumstances. Feel free to inquire in advance, before you put your name in for consideration at your institution.

Similarly, some students already have advanced degrees (MS, for example) or are truly speeding through their programs, and plan to be finished by year 4. If you can convince your selection committee that you are the best nominee, NCI will accept your application. Again, the **nomination letter** should explain the special circumstances. Remember that the 2 phases are intended to be continuous, and that the F99 funding will not be extended beyond 2 years.

Script for Slide 14, continued

The NIH does not allow two applications with substantial overlap to be under review at the same time. If a nominee submitted an F31 application for the December 8th deadline (3rd cycle), let the F99/K00 program director (me) know. It will be OK to submit but we need to carefully monitor the timing. We will work with you.

This award is intended for students who are near the end of their dissertation and so they really should be beyond the stage of intending to submit an F31. However, for those who still wish to submit an F31 after the F99 has been submitted, we advise you to not submit for the April 8th deadline (1st cycle) , but to wait until the August 8th (2nd cycle). This gives time for the F99/K00 summary statement to be released, which will allow you to submit.

Your application will be reviewed by an NCI panel. Your application should make a strong case that your training has prepared you for a future career in cancer research and that you are sincere in your commitment.

Funding

1-2 years of support for completing PhD dissertation (F99)

- Stipend, Tuition, and Training Related Expenses similar to F31
- Funds to attend an F99 Fellows meeting

Up to 4 years of support for postdoc training (K00) at a US institution

- Higher salary than F32
 - (\$50,000 with \$3,300 annual increase + fringe benefits)
- Up to \$4500 for Tuition, plus \$3000 for Research Expenses
- 8% Indirect Costs allowed for the Institution
- Funds to attend a K00 Scholars meeting

Script for Slide 17

How is the award structured financially? The predoc F99 phase will give support for up to 2 years, but will not be extended. So you need to graduate by September 1, 2019. In the K00 postdoc phase, you are an employee with full benefits. You may postdoc at the NIH or other national laboratory, but if you do, the funds will come from a different source.

Special Instructions for F99/K00 application

Use the Forms D fellowship package with the following modifications:

- **Institutional nomination letter** is required
- **Fellowship Applicant Section** has modified instructions
- **Specific Aims and Research Strategy** follow a non-traditional format
- **Review Criteria** are different from the F31!

Script for Slide 19

- The F99 uses the same SF424 (R&R) fellowship application package that is used for other fellowships, including the F31 NRSA predoctoral fellowship.
- But there are some key differences from the F31 and each of these items has been “tweaked” from last year.
- A Nomination letter is required and **must** be included as part of the application. I’ll add some more detail about the Nomination Letter later.
- The Specific Aims and Research Strategy Sections of the F99 do not use the typical research grant format. I’ll elaborate on this in a few minutes.

General Guidance

- **Read the RFA** including review criteria
- **Read Section F.130** of Application Guide
- **Start NOW on Letters of Reference (F.130)**
 - Provide directions to your referees – they submit through eRA Commons. See [NIH Reference Letter website](#)
 - 3 minimum, 5 maximum
 - Referees should not be directly involved in the application - not sponsor or co-sponsor
 - Check the status often – late letters are not accepted
 - If required letters are missing, application will not be reviewed

Script for Slide 21

You must read the RFA instructions in **Section IV. Application and Submission Information** very carefully!

- There is a hierarchy to instructions for applying to the NIH: first there's the NIH application guide, which gives generic instructions. Then there are specific instructions for various types of applications (individual fellowships have their own section), and then there is the funding opportunity announcement (RFA-CA-17-014). If there is different advice offered, remember that the RFA overrules the application guide - follow the RFA.

Reference letters: Cannot re-use letters from a different/prior application. Must get new letters every time.

Download Application Package or Apply Online



Grant Application Package

Opportunity Title:	The NCI Predoctoral to Postdoctoral Fellow Transition A
Offering Agency:	National Institutes of Health
CFDA Number:	
CFDA Description:	
Opportunity Number:	RFA-CA-17-014
Competition ID:	FORMS-D
Opportunity Open Date:	01/17/2017
Opportunity Close Date:	02/17/2017
Agency Contact:	eRA Service Desk Monday to Friday 7 am to 8 pm ET http://grants.nih.gov/support/

Script for Slide 24

- Even if you apply online, I recommend downloading the application package for RFA-CA-17-014 (links are in the RFA). Adhere to the table of page limits for fellowships, and to the RFA, and to the SF424 Forms D application guide instructions.
- Also, there are answers to FAQs found under Resources on the F99 website, and links to those for the F31 that may be helpful.

The Forms D Fellowship Application

Select Forms to Complete

Mandatory

Save

[SF424 \(R & R\)](#)

[Research And Related Other Project Information](#)

[Project/Performance Site Location\(s\)](#)

[Research and Related Senior/Key Person Profile \(Expanded\)](#)

[PHS Fellowship Supplemental Form](#)

Optional

[PHS 398 Inclusion Enrollment Report](#)

[PHS Assignment Request Form](#)

Script for Slide 25

- The good news is that unlike past application packages, Forms D presents the forms and instructions in a logical order!
- I will lead you through each of the mandatory forms and point out things that are specific to the F99, and give some advice about what reviewers will be looking for.
- As for the Optional forms: Inclusion Enrollment report is required if you are doing Human Subjects research. The Assignment Request form is not relevant, since all applications to this RFA will be reviewed in one special emphasis panel here at NCI.

SF424 (R&R) F.200

- 8. Type of Application: **NEW** (even if you applied last year)
- 12. Start Date: the start of the F99 phase - Use September 1, 2017
- 12. Ending Date: the end of the K00 phase – Use August 31, 2023
- 15. **Estimated** Project Funding: covers both phases
 - Use the Budget section of RFA-CA-17-014 & your current institution's fringe benefits costs
- 21. Cover Letter
 - Cite RFA-CA-17-014 and include list of your referees (reference letter writers)

Script for Slide 27

- This SF424 form is often called the Cover Sheet. It is 2 pages and contains nuts and bolts information. But there are some F99-specific instructions.
- Please request the maximum time allowed (2 years for F99 and 4 years for K00). The NIH issues grants in 1-year blocks, and you don't want to run short if you need an extra day or an extra month to finish the F99 phase. You can always finish early!

R&R Other Project Information **F.220**

- 1. Human Subjects: More on this later (**F.430**)!
- 2. Vertebrate Animals: More on this later (**F.430**)!
- 6. International activities
 - Although foreign institutions are not allowed to apply, foreign components are permitted
- 8. Bibliography & Reference Cited
 - Do not use *et al* !
- 12. Other Attachments
 - Nomination Letter (**RFA-CA-17-014**)

Script for Slide 29

- The Research and Related Other Project Information forms in this section are all about your current university and your current project, not the postdoc K00 phase.
 - 1 & 2. This section starts off with Human Subjects and Vertebrate Animals. These are basic yes/no questions, but in a later section F.430, there are more sections. I'll give advice later on these topics at the end of my talk.
6. International activities Although foreign institutions are not allowed to apply, foreign components are permitted. If you have a foreign collaborator, list them here.
- 8. Bibliography & Reference Cited Do not use et al! Cite using full names and the full references. DOI links are appreciated by reviewers.
 - 12. Other attachments – this is where the nomination letter goes. I'll give more details on this next.

Nomination Letter (2 pages)

- Signed by the head of the graduate program and the institutional grants official
 - **If research involves another institution, submit a joint nomination letter with signatures from both institutions**
- Names the nominee and the primary sponsor
- Describes the nominee and the nomination process
- Confirms the eligibility of the nominee
 - **3rd or 4th year of a PhD program and expected to finish within 2 years**
- If applicable, describes any exception to eligibility
- If applicable, describes the visa status

Script for Slide 31

- The nomination letter may be 2 pages long. It should be signed by the head of the graduate program and the institutional grants official. Along with the Letter of Intent, this guards against there being multiple nominees from the same place. If the dissertation work involves more than one institution, for example if you are doing research at a center that does not offer a formal degree, we encourage you to submit a joint nomination letter from both program heads.
- The Nomination Process is handled by the institution. Most educational institutions have committees that select grad students to receive other fellowships, scholarships, or internal awards. My advice is for institutions to tap into these and to sync with the F99 timeline, as possible.
- The Nomination should confirm eligibility, that the nominee is in the 3rd or 4th year of a PhD program in an appropriate biomedically related field. The nominee is not required to be doing cancer research for the F99 phase, but **MUST** propose doing cancer-focused research for the K00 phase. It is up to the nominee to make a strong case that he/she is committed to pursuing a career as an independent cancer researcher.

Script for Slide 31, continued

- If an eligibility exception was requested and granted, the nomination letter should mention the reason. To ask about exceptions to 3rd and 4th year eligibility, contact Michele McGuirl.
- If the nominee is here on a visa, the letter should also give assurance that the candidate's visa status is up to date, that there are no known obstacles for completing the F99 phase, or for obtaining a visa at the time of the K00 transition. One example of a common obstacle for the K00 phase is a home country requirement to return after the PhD is awarded. **Do not include the visa in the application.**

Project/Performance Site Location(s) F.230

- **Degree-granting institution must submit application**
- **If research is not done on the degree-granting campus, add a second site**
 - **Degree-granting institution may be the primary or secondary performance site**
- **If work involves Human Subjects or Vertebrate Animals, be sure the site where the work will be done has the proper assurances**

Script for slide 34

- For those doing all of their research at their degree-granting university, this part is straightforward. For others, a second performance site should be added. The primary site should be where most of the work will be done. The Human Subjects and Vertebrate Animal approvals must be for each site where the work will be done.

Senior/Key Personnel **F.240**

Applicant /Nominee: your role is PD/PI

Sponsor: role is “Other (Specify)” then

- Enter “Sponsor” or “Co- Sponsor” in the Other Project Role Category field

Others (Collaborators, Contributors)

- Include here if they contribute in a substantive, meaningful way to the project (not just handing you a reagent)
- May not write letters of reference for you!

Script for Slide 36

- Key Personnel: you must list yourselves and your sponsors. I'll give some advice about the biosketches on the next slide.
- Co-sponsors: reviewers look to see if their role is substantive and well-defined in the proposal. Do not include a co-sponsor just to have one, or just because they are famous! If your sponsor has limited mentoring experience, a co-sponsor who has an established track record of mentoring grad students might help your case. But only if the person meets with you regularly and is highly engaged in your training plan.

Biosketches

- **Nominees use the Predoctoral Fellowship Applicant BioSketch**
- It is OK for fellows to list manuscripts in preparation, submitted, or in revision
- Provide a link to your **MyNCBI** list of publications/products
- **Personal statement:**
 - Explains suitability for role on this fellowship project
 - May cite up to 4 relevant publications or research products
- **Contributions to Science (up to 5):**
 - Fellowship applicants may want to highlight 2-3 contributions
 - Each no longer than ½ page, each including up to 4 citations
- **For Nominees: Research Support → Your Scholastic Performance**

Script for Slide 38

Biosketches are required for all Senior/Key Personnel and Other Significant Contributors. Be sure to use the most recent biosketch format. Fellowship applicants may include manuscripts in preparation, submitted, or in revision, but these carry less weight with reviewers. If one of these gets published and there are more than 30 days before the actual review date, you may submit an update to the SRO, scientific review officer, who runs the review meeting. You may also use an update to report any positive changes in sponsor funding (new grants), since reviewers weigh this heavily when evaluating your sponsor. I do not yet know when the review will occur, but eRA Commons will post it.

Personal Statement: Briefly describe why you are well-suited for your role(s) in this project. It helps if the sponsor and other key personnel customize their PS to their roles on this application; don't just use their research biosketch. Your yours, include: aspects of your training; your previous experimental work on this specific topic or related topics; your technical expertise; your collaborators or scientific environment; and/or your past performance in this or related fields.

Script for Slide 38, continued

If there are factors affecting your past productivity that you wish to explain, such as family care responsibilities, illness, disability, or military service, you may address them in your personal statement. Indicate if you have published or created research products under another name.

Contributions to science: Briefly describe up to five of your most significant contributions to science. While all applicants may describe up to five contributions, graduate students and postdoctorates are encouraged to consider highlighting two or three they consider most significant. Descriptions may include a mention of research products under development, such as manuscripts that have not yet been accepted for publication.

Additional Information: Research Support and/or Scholastic Performance:
Predoctoral Applicants use this section to provide information about their grades. List by institution and year all undergraduate and graduate courses, with grades. In addition, in the space following the chart, explain any grading system if other than 1-100, A, B, C, D, F, or 0-4.0. Show levels required for a passing grade.

PHS Fellowship Supplemental Form **F.430**

- **Fellowship Applicant Section**
- **Research Training Plan Section**
- **Sponsor(s), Collaborator(s), and Consultant(s) Section**
- **Institutional Environment and Commitment to Training Section**
- **Other Research Training Plan Section**
- **Additional Information Section**
- **Budget Section**
- **Appendix (do not use!)**

Script for Slide 41

- Finally – the “meat” of the application! I’ll go over the parts in red in some detail. My advice is to carefully read the RFA instructions and the review criteria before writing this part. Every part of the application is important, so don’t focus solely on the research plan.
- Appendix rules are very strict. Don’t risk being returned without review for “overstuffing.”

Fellowship Applicant Section

- **Applicant's Background and Goals for Fellowship Training**
 - **Doctoral Dissertation and Research Experience**
 - **Training Goals and Objectives**
 - **Activities Planned Under This Award**
- **Reinforced** by the Research Training Plan & the Sponsor Section
- **Describe personalized career goals** with appropriate career stages for both phases and beyond
- **Include research & career development activities** for the entire award period (both phases)
 - **Identify areas for growth and development**
 - **Propose activities to address these areas**

Script for Slide 43

Fellowship Applicant Section: develop this in collaboration with sponsor but it should be written by you. NCI checks this against your sponsor lab's past submitted grants. This section is 6 pages long – my advice is to use it all!

This section should reinforce the Research Training Plan and be consistent with what your sponsor says. Some redundancy is OK. Use this attachment with its 3 sub-sections, to describe personalized career goals with appropriate career stages for both phases and beyond. Be sure to include both research & career development activities for the entire award period (both phases). Allotting 95% - 100% of your time only to research is probably not a good idea. You may wish to identify areas for growth and development and then propose activities to address these areas.

Script for Slide 43, continued

1. **Doctoral Dissertation and Research Experience:** Summarize all of your research experience in chronological order. include the areas studied and conclusions drawn. Place your current field and prior training within the context of your ultimate career goal. Note that the Doctoral Dissertation and Research Experience was not required for last year's F99/K00!
2. **Training Goals and Objectives:** Describe your long term career goal, the training goals for each phase, and explain how this award will enable the attainment of these goals. Identify the skills, theories, conceptual approaches, etc. to be learned or enhanced during the award. What skills do you have, what is needed for your future independent career? How will you identify a K00 mentor? Discuss how the proposed research will facilitate your transition to the next career stage F99 → K00 → later on.
3. **Activities Planned Under This Award:** Describe the scientific and professional development activities planned for each phase and explain how the activities will facilitate the transition to each subsequent career stage. Include a timeline with scientific, professional development, and career milestones. Describe, by year, the activities (research, coursework, etc.) and estimate the percentage of time to be devoted to each activity. The activities should be individually tailored to your career and be well-integrated with your research project. Describe the skills and techniques as well as any planned, non-research activities (e.g. those relating to professional development and clinical activities). Provide a timeline!

Research Training Plan Section

- **3. Specific Aims***
- **4. Research Strategy***
- **5. Respective Contributions**
- **6. Selection of Sponsor and Institution**
- **8. Training in the Responsible Conduct of Research**

Follow the normal guidance for 5, 6, and 8. I'll go over Specific Aims and Research Strategy next.

Specific Aims (1 page)

All applications **MUST** have these three Specific Aims:

Aim 1: The Dissertation Research Project – progress thus far

Aim 2: The Dissertation Research Project – work to be completed

Aim 3: The Postdoctoral Research Direction

Script for Slide 47

Let's turn to the Research Training Plan. The typical nominee is far along in their defined dissertation research project but has yet not committed to a specific postdoc lab. This presents a challenge for writing a traditional Research Training Plan – NCI does not want to prolong the time to degree by having applicants propose additional new experiments for the F99 phase, and applicants are not yet in a position to write a detailed research proposal for the K00 phase.

To address this, **NCI requires that all applications must use these 3 specific aims. This is different from last year!**

This is very different from other fellowships, and we were lenient last year for those who did not follow the RFA instructions. This will not be the case this year, since the RFA was rewritten and is quite explicit.

Script for Slide 47, continued

Think of Aim 1 as setting up the dissertation's specific hypothesis and objectives that will be used to examine the hypothesis and the preliminary data.

Think of Aim 2 as a description of the methods/approaches/techniques to be used for the remaining experiments; add a discussion of the expected outcomes, possible problems and how they will be managed, and, when appropriate, alternative approaches that might be tried if the initial approaches do not work.

Aim 3: Should not be a continuation of the PhD research, unless you plan to take on a whole new aspect of the project. For example, a physicist might work on the biology for her postdoc phase. Reviewers look for the training potential – the need for **more and different** training. NCI recommends that predocs move to a new mentor and institution for the postdoc phase.

Research Strategy Section (6 pages)

Significance & Approach: Address the science & the career development activities for both phases.

Aim 1: Describe the overall goal, rationale, hypotheses, and approaches of the dissertation research project; describe progress made thus far; highlight skills and techniques that contribute to the long-term career goal.

Aim 2: Provide a detailed description of the research to be completed in the F99 phase, including experimental design, anticipated results, and potential follow-up studies. Highlight new skills to be learned.

Aim 3: Identify the research direction to be pursued for the K00 phase and explain the rationale for pursuing this direction. Describe the scientific question to be addressed, the approach(es) to be taken, and the scientific goal to be achieved. Identify new scientific and career development skills to be acquired.

Script for Slide 50

- The Research Strategy has 2 components: Significance and Approach. Innovation is not required for fellowships.
- It's important to address both scientific and career development for all 3 aims. The combination of plans for the PhD and postdoc phases should prepare the applicant for a career as an independent investigator in cancer research. There should be a logical and compelling connection between the phases and the aims, and they should support the career goal.

Frequently Asked Questions about the Research Training Plan

- How many pages do I write for each Aim?
- How do I write my introductory paragraphs for the Specific Aims?
- I know someone who could be my postdoc mentor. Should I get a Letter of Support from that person?
- And the question I WISH people asked...

Should the application title, project summary, and project narrative reflect BOTH my dissertation project and my postdoc plans?

YES!

Script for Slide 52

1. Use your best judgement! Reviewers will be looking to see that you can coherently explain your dissertation project, that you have a handle on the science that remains to be done, and that it is reasonable to complete the work within a 1-2 year period. Do not neglect Aim 3! I recommend at least 1 page. Remember that the K00 phase makes up 2/3 of the funding period. So do not skimp on this part just because you don't yet have a defined postdoc project.
2. You might discuss a pressing problem in an area of cancer research, why that area piques your interest, and where you see yourself contributing. What approach will you take? Consider the kinds of skills you will need (but don't have yet) to succeed in that career. Explain what you will look for in an institution environment and a mentor, and be sure it all jives with your stated career goal.

Script for Slide 52, continued

1. Unless you have a definitive commitment to join that lab as a postdoc, avoid submitting a letter of support. Submitting Letters from more than one potential postdoc mentor really doesn't add much, since you clearly don't have a commitment. And you don't want to be in a situation where a reviewer feels slighted not to be on your potential list!
2. If your title is only about your dissertation, what will that say to reviewers? This is not an F31 fellowship application!

Sponsor(s), Collaborator(s), and Consultant(s) Section

- **Sponsor and Co-Sponsor Statements**
 - **Research Support Available – for your dissertation project**
 - **Previous Fellows/Trainees**
 - **Training Plan, Environment, Research Facilities**
 - **Total Number of Fellows/Trainees to be Supervised**
 - **Applicant's Qualifications and Potential for a Research Career – as an independent investigator**

- **Letters of Support from Collaborators, Contributors, Consultants**

Script for Slide 55

The Sponsor statement is written by your sponsor and co-sponsors. There are 5 parts.

Research Support Available: list all current and pending research and research training support **specifically available** for this particular training experience. If the sponsor's research support will end prior to the end of the proposed training period, the sponsor should provide a contingency plan for how the fellow's research will be supported.

Previous Fellows/Trainees: Give the total number of predoctoral and postdoctoral individuals previously sponsored. Select up to five that are representative and, for those five, provide information on time spent in the lab their present employing organizations and position titles or occupations.

Training Plan, Environment, Research Facilities: Describe the research training plan that the sponsor has developed specifically for the Fellowship applicant. This should be individualized for the applicant, keeping in mind his/her strengths and any gaps and needed skills. Include items such as classes, seminars, opportunities for interaction with other groups and scientists, and professional skills development opportunities. Describe the research environment and available research facilities and equipment. Indicate the relationship of the proposed research training to the applicant's career goals.

Script for Slide 55, continued

Describe the skills and techniques that the applicant will learn. Relate these to the applicant's career goals. If a sponsor team is proposed, this plan should describe the role of each sponsor and how they will communicate and coordinate their efforts to mentor the applicant effectively. the training plan should facilitate the applicant's transition to the next stage of his/her career.

Total # of trainees to be supervised in the lab at this time. Describe how often sponsor meets with the applicant.

Applicant's Qualifications and Potential for a Research Career: Describes how the Fellowship applicant is suited for this research training opportunity based on his/her academic record and research experience level, including how the research training plan, and sponsor's own expertise will assist in producing an independent researcher.

Letters of Support are not the same as letters of reference – they should simple state what will the person provides for the project (reagent/expertise, etc.) 6 pages total. Collaborator biosketches may be includes as key personnel. Again, it helps if they adjust their personal statements to their roles on the fellowship project.

Frequently Asked Questions about the Sponsor Statement

- My sponsor is an Assistant Professor and doesn't yet have (**funding/mentoring experience**). How do we handle this?
- Is having a co-sponsor recommended?
- Do my sponsor and co-sponsor get 6 pages each?
- What do Reviewers look for?

Script for Slide 58

1. Lack of a track record of mentoring, weak history or no current grant funding: REMEMBER these are part of the review criteria – you will likely be at a disadvantage. To mitigate weaknesses in this part, be sure the training plan is well written and detailed, and customized for you.
2. Lack of Funding: Are there other resources available to you? explain if there are back-up plans in place, should pending funding not come through.
3. Do not add a co-sponsor just to shore up the primary sponsor “on paper.” Add a co-sponsor only if the person meets a key need that your sponsor does not provide. the co-sponsor’s role should be clearly defined, the involvement should be substantive, and interactions with the applicant should be regular. Is there already an established collaboration between sponsor/co-sponsor? Do the planned activities and career goals warrant the co-sponsor’s participation?

Script for Slide 58, continued

1. No. 6 pages includes the information from All sponsors/co-sponsors combined. It may be written by the primary sponsor, by both together (“we”) or with separately written parts by each sponsor. But the information from all S and co-S must be covered within the 6 pages.
2. Reviewers look to see if the co-sponsor involvement is well-justified and integrated into the overall plan, or if it is just window dressing. Reviewers also look to see that that the sponsor’s training plan for you reinforces your career goals and activities. Be sure all of the sections support the same overall story. Disconnects between the applicant and sponsor sections generally review very badly.

F99/K00 Review Criteria and Scoring

- **Overall Impact:**
 - Likelihood for fellowship to enhance applicant's potential for, and commitment to, an independent scientific research career

- **5 Scored Review Criteria:**
 - Applicant
 - Sponsor/Mentor
 - Research Training Program
 - Training Potential/Development Plan
 - Institutional Environment

Script for Slide 61

This is how review works: 3 reviewers are assigned to your application. Each provides a number from 1 – 9 (1 is best) for the 5 individual review criteria (READ) and then they provide a preliminary overall impact score. This happens before the study section meets. At the review meeting, reviewers who are in conflict of interest step out of the room when an application comes up for review. Those applications with the better (meaning lower) impact scores are discussed. Reviewers may also ask for any application to be rescued and reviewed. After the discussion is over, every member of the study section in the room votes on a final impact score. The scores are eventually averaged and multiplied by 10. that is the score you receive.

For fellowship and career development grants, the whole is often greater than the sum of the parts. Reviewers look to see whether each section of the application connects well to the overall goal. Use this to your advantage – one section should reinforce and not contradict what is in the other sections. Reviewers want to see that the application is well-thought out, and that the sections and other components are well-integrated and part of a greater plan.

F99/K00 Review Criteria Differ from F31

- **Applicant:** Emphasizes Letters of Reference
- **Sponsor/Mentors:** Evaluates the plan for identifying a K00 mentor
- **Research Training Program:** Evaluates the research plans for both phases and the research milestones for transitioning to K00
- **Training Potential/Development Plan:** Evaluates plans to monitor the progress in research & career development for both phases and the professional skills milestones for transitioning to K00
- **Institutional Environment:** Evaluates the plan to identify a K00 institution and mentor and its fit with the K00 research direction

Script for Slide 63

Applicant: Biosketch and Fellowship Applicant section are important, but letters of reference are very important.

Sponsor/Mentor: Biosketch and sponsor statement. The plan to identify a good K00 mentor, and how you describe the type of mentor and institution you seek for the K00 phase are also important.

Research Training Plan: perhaps less emphasis on the details of the science. Reviewers want milestones for both phases! Use your timeline in the fellowship applicant section wisely.

Training Potential/Development Plan: mostly the applicant section and sponsor statement.

Institutional Environment: that section, is about the F99 phase but also about the postdoc plans. Reviewers want to see your ambition here, to reach out for the best mentor in the best institution. The F99/K00 is an elite program meant to pick those who want to excel in the next phase. But I emphasize that based on last year's results, you do not need to be at a high powered lab/institution for your PhD to get an award.

Vertebrate Animals

- As applicable to the F99-phase research
- Follow [current NIH Guidelines](#) and include a Vertebrate Animal Section in the application
 - Instructions have recently changed (now only 4 points)
 - if reviewers raise concerns, this holds up the award
 - Xenografts: identify the source of human tissue
 - Might qualify it as Human Subjects Research
- IACUC approval needed before an award can be made, but not for submitting the application

Human Subjects Research

- As applicable to the F99-phase research
- Common mistakes involve the E4 exemption status, and human specimens, cell lines or data.
 - *It is important to note that for HS, an investigator is defined as anyone involved in conducting the research*
 - If your work uses human materials but does not qualify as HS, upload a Human Subjects document to explain this!
 - If reviewers raise concerns, this holds up the award
- IRB approval is needed before an award can be made, but not to submit an application

Script for Slide 66

Finally, I want to say a couple of words about Human Subjects, and then Vertebrate Animals. This application covers only the F99 project. Mistakes in these sections can cause doubt in reviewers minds about the involvement of the sponsor, and this can change reviewer scores.

There are some common mistakes that show up frequently. First, who is an investigator? Individuals who provide coded information or specimens and collaborate on other activities related to the research or training are considered to be involved in the research. This includes providers who will be co-authors. If any investigator has access to the PII (personal identifiable information), the fellowship will be considered to be Human Subject research, even if the applicant does not have access to the PII.

Samples, data from people who are dead is not HS Research. Samples from a databank or tissue bank, where the banks cannot reveal PII, are not HS Research. But if they have been collected from live people specifically for this project, it is HS Research.

Script for Slide 66, continued

HS yes, E4: claiming exemption E4 means that it is HS Research! You can NOT claim E4 and say it is not HS research.

E4 is rare these days. But if a collaborator who has existing specimens will provide you with a subset of samples and these are randomized and no key is created or kept, this may qualify as E4. If the collaborator retains access to a key and can identify the samples, it is HS Research, and E4 does not apply.

See the flow charts on the NIH HS website.

If human tissue is involved comes deidentified from a tissue bank or other source that is prohibited from releasing the PII, it is not HS research. It's a good idea to upload a Human Subjects document and explain why the work does not qualify as HS research. Otherwise, reviewers will flag it.



**NATIONAL
CANCER
INSTITUTE**

www.cancer.gov

www.cancer.gov/espanol