Applying for Individual National Research Service Award (NRSA) Fellowships

Resources compiled by the BRET Office of Career Development

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Last updated 01/02/15. Please contact Dr. Kim Petrie, kim.petrie@vanderbilt.edu, if you notice outdated information.
“Quick Start” Guide to Applying for NRSA Fellowships
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STEP 1: Find the right NRSA mechanism. There are four types of NRSA fellowships for students and postdocs.
   1. F30 predoctoral fellowship for individuals in dual-degree programs (MD/PhD and other dual-degrees)
   2. F31 predoctoral fellowship for individuals in PhD programs
   3. F31 diversity predoctoral fellowship for individuals from underrepresented groups in PhD programs
   4. F32 postdoctoral fellowship

Read the Program Announcement (PA) at the “F kiosk” to see if the institute that would fund your research also funds the NRSA you need. As of 2014, most NIH institutes fund F fellowships. However, the NIH institutes fund different numbers of F fellowships. If you are deciding between two different institutes or two different mechanisms, investigate the funding success rates for each institute or mechanism under consideration.

STEP 2: Read the Institute-Specific Guidelines for the NRSA mechanism of interest. A hyperlink to institute-specific guidelines is in the “Special Notes” section of the PA, under the list of Participating Organizations.

STEP 3: Read the PA to confirm you are eligible for an NRSA. US citizenship or permanent residency is required. NIH limits the number of years trainees can be supported by NRSA fellowships and institutional training grants.

STEP 4: Decide when to apply. Applications are accepted in 3 cycles with deadlines in April, August, and December.

STEP 5: Talk to your departmental grants administrator at least 8 weeks before the submission deadline.
All NRSA fellowship applications submitted from Vanderbilt are submitted via Vanderbilt’s grants management software, COEUS, (not online via grants.gov), and approved by the Office of Sponsored Research. Many departments have grants administrators who help students and postdocs navigate this process. Not only are the administrators valuable sources of advice, but many administrators will fill out the COEUS forms for you, give you a checklist to assemble the necessary components, and register you on eRA Commons.

STEP 6: Review the instructions for the NIH Individual Fellowship Application Guide SF424 (R&R), especially:
Part I, Section 4.4 “Other Project Information Component” outlines requirements for the abstract, bibliography, references, and narrative components that your research advisor needs to write.
Part I, Section 5 “Completing PHS Fellowship Specific Components” provides instructions for the narrative sections, including research training plan. Each section is clearly defined along with format and page guidelines. Part II is required reading if you are doing human subjects research. Part III describes NIH policies on things like Responsible Conduct of Research and Resource Sharing. Read policies that are relevant to your application.

STEP 7: Email or call the Program Officer (PO) at the specific NIH Institute or Center (IC) where you plan to apply. The PO oversees scientific and technical aspects of grant and fellowship applications. POs serve as consultants for scientists seeking funding from that IC. Be ready to discuss your specific aims and describe how your project fits within the mission of the IC. The goal of this conversation is for the PO to confirm your project falls in the IC’s current funding priorities.

STEP 8: Use the NIH RePORTER database to identify other Vanderbilt trainees with funded NRSA fellowships, especially from the institute that would fund your project. Your student and postdoc colleagues are a valuable source of advice, and they may even share parts of their application with you as examples!
NRSA Individual Fellowship Submission Deadlines and Links to Forms
From [http://grants1.nih.gov/grants/funding/submissionschedule.htm](http://grants1.nih.gov/grants/funding/submissionschedule.htm)

<table>
<thead>
<tr>
<th>Activity Code</th>
<th>Program Description</th>
<th>Application Form</th>
<th>Cycle I Due Date</th>
<th>Cycle II Due Date</th>
<th>Cycle III Due Date</th>
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| F Series Fellowships  
new, renewal, resubmission | *Individual* National Research Service Awards  
(Standard)  
(see [NRSA Training Page](http://grants1.nih.gov/grants/funding/submissionschedule.htm)) | **SF424 (R&R)** | April 8 | August 8 | December 8 |
| F31 Diversity Fellowships  
new, renewal, resubmission | *Individual* Predoctoral Fellowships (F31) to  
Promote Diversity in Health-Related Research  
(see [NRSA Training Page](http://grants1.nih.gov/grants/funding/submissionschedule.htm)) | **SF424 (R&R)** | April 13 | August 13 | December 13 |
All about NIH Program Officers

Who is the “Program Officer” (a.k.a. “Project Director” or “Project Officer”)?
Each NIH institute has “Program Officers” or “POs” who oversee the programmatic, scientific, and technical aspects of grants awarded by that institute. Most POs have PhDs, and many ran independent laboratories before joining the NIH. POs have responsibilities that can be broadly divided into “internal” and “external” roles:

1) **Internal** (serving the institute)
   - Develop research and training program initiatives to meet the institute’s mission
   - Report on scientific progress of individual grantees
   - Report on accomplishments of research and training programs
   - Make funding recommendations to institute director

2) **External** (serving scientists who are external to the NIH)
   - Pre-application: serve as a “consultant” to scientists seeking funding from the institute to help scientists navigate the application process
   - During review: observe the scientific review process and discuss review issues with applicants
   - Post-award: review progress reports and provide advice as needed to grantees

Why do I need to talk with the PO before I submit a fellowship application?
Each of the NIH institutes funds projects relevant to its own mission. You could write a fabulous proposal, but if it isn’t relevant to the mission of the NIH institute you’re targeting, or if the institute has exhausted their budget for projects in that area, your project may not be funded even if it is reviewed well.

The **Program Officer** is the institute administrator who helps determination if your proposal falls within the mission and interests of the institute. Fortunately, you can (and should!) contact the PO **before** you submit your application. The PO can review your specific aims and confirm the institute would be interested in funding that type of proposal. If the institute is **not** interested in funding your type of proposal, the PO can recommend other institutes that might be. The PO might also provide advice on tailoring your application to the institute’s interests. He or she can also provide you with statistics on how many applications the institute receives and funds each year.

When should I contact the PO?
Contact the PO early in the process of writing your application, as soon as your ideas are formed well enough to be able to explain your specific aims and why they are relevant to the institute’s mission. The earlier you reach out, the more time you have to change the direction of your proposal if needed!

What should I say when I contact the PO?
This guide contains an example email request to an NIH Program Officer. See the table of contents.
Tips for Interacting with NIH Program Officers

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- Have a draft of your specific aims and your biosketch ready when you contact the PO. He or she will likely ask you to email these documents to them.

- Do your homework about the institute or center (IC) BEFORE you contact the PO. Use the IC website to explore their stated funding priorities and mission. Use the NIH RePORTER tool to search the database of previously funded projects to see if the IC has funded projects in your area. Be able to explain how your project relates to the IC mission.

- You can contact the PO by email or phone. They may not be able to respond immediately, so if you reach the PO’s voice mail, leave a message with your name, institution, return number, and reason for calling. If they haven’t returned your message within a few days, follow up.

- If you contact the PO by email, you may want to ask to set an appointment to talk by phone.

- Be ready to discuss your specific aims and explain how you think your project relates to the IC mission. Your goal for the discussion is for the PO to confirm the IC would be interested in funding your type of proposal.

- If the PO does not feel the proposal is appropriate for their IC, ask the PO to recommend a different IC that may be appropriate.

- The cover letter of your application is used by the NIH Center for Scientific Review to assign your proposal to 1) a specific study section and 2) a specific NIH IC that would be appropriate to fund your proposal. If you have a productive conversation with a PO about your proposal and the PO it is appropriate for funding by that IC, note this explicitly in your cover letter, especially if your project might be assigned to more than one IC.

- If your proposal seems like it could be funded by more than one IC, discuss this with the program officer. It may be appropriate for dual assignment.

- The PO can provide information on funding statistics for fellowships. It is acceptable to ask him or her how many applications are typically received, reviewed, and funded each year.
Example Correspondence with an NIH Program Officer

The two emails below are real examples of correspondence between an NIH Program Officer and a Vanderbilt graduate student. These examples are provided to demonstrate best practices for contacting program officers and to help you anticipate items the PO may request. Be aware that each institute approaches communications differently, and you may or may not be asked to provide the specific items requested by this program officer.

Email to the program officer:
Dr. [insert program officer last name here],

I’m a medical student at Vanderbilt University who is completing a year-long research fellowship. I recently joined the MSTP program and I will begin my PhD in neuroscience the fall of 2011. My current research focuses on functional and structural MRI of young adults with inhibited temperament. We have developed an fMRI paradigm for studying anticipatory anxiety in inhibited temperament, and for my NRSA application, we plan to use this paradigm to study children with social anxiety disorder. I just wanted to touch base with you and make sure that this project sounds like it would meet the goals of the Division of Developmental Translational Research’s goals and see if you have any advice or thoughts about my application for an F30 grant.

Thank you,
[insert signature here]

Key elements of this email:
1. The salutation is professional (Dr. ____). Avoid informal salutations (e.g. Hi Bob).
2. The email is brief, concise, and clear.
3. Student clearly states her institution, program affiliation, area of research, and NRSA mechanism (F30).
4. Student includes a full signature with first/last name, program, institution, phone number, and email.

Response received from the program officer:
Dear [applicant name],

Your very brief description appears to be appropriate for NIMH and DDTR. It would be helpful to have some additional information about your project. A more detailed description of the basic elements of your application and current status will be helpful in providing you with appropriate advice. You’ve already provided some of this information. It would also be useful if you included your NIH biosketch with your reply.

1. Applicant Information:
   Name of applicant:
   Sponsoring institution/dept/degree program:
   Title of project:
   Year in graduate school or time spent at current position:
   Previous NRSA funding (training grant, etc):
   Requested length of NRSA:
   Targeted NRSA application deadline:
   Please also include a copy of your NIH bio-sketch

2. Sponsor(s) Information:
   Name of sponsor(s):
   Sponsor(s) research support (NIH grants or equivalent)

3. Project Information:
Hypotheses (If you have a schematic model, please feel free to include it):

Specific Aims:

New skills/techniques the applicant will be learning:

Approach/Animal Model/Study population and recruitment (including age range):

Outcome(s) of interest/dependent variable(s) and how will it (they) be measured:

What is the link of the proposed aims to mental disorders (the link may be indirect for basic neuroscience)?

How does this project address DDTR High priorities?

How does this project fit within NIMH’s Strategic Plan?

Please make sure you are using the most current instructions for the application as some recent important changes were made with allowable pages.

As soon as I’ve reviewed your plans I can provide additional advice or information that will be useful as you develop your application.
Tips for a Successful NRSA Fellowship Application
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These tips are based on discussions with faculty and previous NRSA Fellowship applicants. Thanks to all who shared their thoughts and advice, which is organized according to the five review criteria for F fellowships.

*Before you start writing your NRSA application, read the Program Announcement for the NRSA mechanism for which you plan to apply. For the parent announcements covering multiple institutes, be sure to read the “IC-Specific Information” for the mechanism. This information is hyperlinked in a “Special Note” at the top of the Program Announcement, immediately after the List of Participating Organizations.

Fellowship Applicant:
Are the applicant’s academic record and research experience of high quality?
Does the applicant have the potential to develop into an independent and productive researcher in biomedical, behavioral or clinical science?
Does the applicant demonstrate commitment to a career as an independent researcher in the future?
F30: Are the applicant’s interests consistent with a career as a physician-scientist or other clinician-scientist?
F30: Does the applicant demonstrate commitment to a career as a physician-scientist or other clinician-scientist?
• The “past research experience” section should set the stage for your proposal. Describe each of your significant past research experiences, ideally showing how you have progressed to your current proposal. Emphasize productivity by explicitly stating when work was published or presented at a meeting, even if you were not first author.
• Provide each of your references with an updated CV and a brief summary of your key accomplishments and career goals. All references should be able to comment on your potential for a career in research.
• If you had a few mediocre grades in science or math courses, and there is an understandable nonacademic reason (e.g. working to put self through college, caring for ill family member), you or your references may want to explain the circumstances briefly.
• Per NOT-OD-11-050, your biographical sketch can be modified to describe factors that may have resulted in a hiatus in your training or reduced productivity.
• Be strategic about the people you ask to provide references for you. If there is an area in which you could potentially appear weak, choose a reference who can comment on your aptitude in that area.
• For MD/PhD students, relate your research to your clinical interests.

Sponsor(s), Collaborator(s), and Consultant(s):
Are the sponsor’s research qualifications (including successful competition for research support) and track record of mentoring appropriate for the proposed fellowship?
Is there (1) evidence of a match between the research interests of the applicant and the sponsor (including an understanding of the applicant’s research training needs) and (2) a demonstrated ability and commitment of the sponsor to assist in meeting these needs?
Is there evidence of adequate research funds to support the applicant’s proposed research project and training for the duration of the fellowship?
If a team of sponsors is proposed, is the team structure well justified for the mentored training plan, and are the roles of the individual members appropriate and clearly defined?
Are the qualifications of any collaborator(s) and/or consultant(s), including their complementary expertise and previous experience in fostering the training of fellows, appropriate for the proposed research project?
**F30: Is there evidence of a match between the research and clinical interests of the applicant and the sponsor(s)?**

**F30: Do the sponsor(s) demonstrate an understanding of the applicant’s training needs as well as the ability and commitment to assist in meeting these needs?**

- Your research sponsor should be able to provide advice on all scientific areas of project. If you are proposing studies for which your PI is NOT an expert in the field, specify a collaborator or co-sponsor who will explicitly provide training in that area.
- Sponsor will ideally have an established record of training graduate students and postdoctoral fellows. Sponsor should always highlight past trainees who pursued research careers in academia, industry, or government. If your sponsor has not trained many graduate students or postdoctoral fellows previously, specify a co-sponsor in the same area of research who has an established track record of training.
- The Sponsor should clearly describe the composition of the lab during your graduate training period. The study section will consider whether the size and composition of the lab group is appropriate for your sponsor’s career stage (i.e. new or established faculty, tenured or untenured). Regardless of your sponsor’s career stage, if the lab has a lot of graduate students and postdocs, the study section may question whether you will receive adequate attention and mentoring. Conversely, if the lab is small, describe how you will have opportunity to interact with other scientists during your training period.
- Many graduate students and postdoctoral fellows meet regularly with their sponsor for individual or lab meetings. However, the study section doesn’t take this for granted! Your sponsor should state explicitly how often and long they plan to meet with you and what the nature of those meetings will be.

**Research Training Plan:**

**Is the proposed research project of high scientific quality? Is it well integrated with the proposed research training plan?**

Based on the sponsor’s description of his/her active research program, is the applicant’s proposed research project sufficiently distinct from the sponsor’s funded research for the applicant’s career stage?

**Is the research project consistent with the applicant’s stage of research development?**

**Is the training plan well-reasoned, and likely to provide an effective, integrated research and clinical training experience, and (F30) ease the transitions between the phases of the dual-degree program?**

**Is the proposed time frame feasible to accomplish the proposed research and/or clinical training?**

- Include preliminary data in your research plan to provide evidence of feasibility. For example, if you propose to measure changes in protein levels following a treatment regimen, do preliminary experiments to show you can detect and quantify the protein at baseline. It is especially important to include preliminary results if the techniques or strategies you use are new to you or your lab.
- The proposed research should be related to your sponsor’s area of research. After all, he or she will be providing the funding for your research and directly mentoring you! However, it should be clear the project idea was yours, not your sponsor’s. Avoid creating the perception the project is something your sponsor was already doing when you joined the lab.
- Specific Aims should be hypothesis-driven. Avoid “fishing expeditions” and descriptive projects.
- Ideally, each Specific Aim can be carried out even if one of the other Specific Aims fails. Avoid making Specific Aims too interdependent.
- Avoid solid walls of text; include figures to illustrate complex pathways and show data.
Training Potential:
*Does the training plan take advantage of the applicant’s strengths and address gaps in needed skills? Does the training plan document a clear need for, and value of, the proposed training?*

**F30:** Are the proposed research project and research and clinical training plan likely to provide the applicant with an integrated perspective and appropriate skills for a physician-scientist or other clinician-scientist?

**F30:** If applicable to the dual-degree program, are appropriate opportunities for electives, early and longitudinal clinical experiences, or other enhanced clinical training available to the applicant? Are appropriate opportunities available to ease the transition to clinical clerkships and for research electives during clinical training?

**F30:** Does the proposed integrated research and clinical training have the potential to serve as a sound foundation that will clearly enhance the applicant’s ability to develop into a productive, independent physician-scientist or other clinician-scientist?

**F31,** **F32:** Do the proposed research project and training plan have the potential to provide the applicant with the requisite individualized and mentored experiences that will develop his/her knowledge and research and professional development skills?

**F31:** Does the proposed research training have the potential to serve as a sound foundation that will facilitate the applicant’s transition to the next career stage and enhance the applicant’s ability to develop into an independent and productive research scientist, physician-scientist or clinician-scientist, as appropriate?

**F32:** Does the proposed research training have the potential to serve as a sound foundation that will clearly lead the fellow to an independent and productive research career?

- Make it clear which skills, techniques, and concepts will be new for you. Show how the new skills learned will build on your previous experiences and help you develop into an independent scientist.
- In addition to lab-based skills, emphasize other activities that you will pursue to enhance your training, e.g., coursework related to your research, or workshops in leadership, grant-writing, manuscript writing, presentation skills, career options for scientists etc.
- Use a table to show clearly how your effort is distributed in each year of the training plan among coursework, research, and other activities you mention (e.g. seminars, writing, etc)

Institutional Environment and Commitment to Training:
*Are the research facilities, resources (e.g. equipment, laboratory space, computer resources, subject populations), and training opportunities (e.g. seminars, workshops, professional development opportunities) adequate and appropriate?*

**Is the institutional environment for the applicant’s scientific development of high quality?**

**Is there appropriate institutional commitment to fostering the applicant’s mentored training toward his/her research career goals?**

**F30:** Does the environment include individuals with similar training who will serve as role models for the applicant?

**F30:** Given the integrated nature of the training program, will appropriate advising be available to the applicant as he/she transitions between the research and clinical components of the integrated training program and to the next career stage?

**F30:** Is there appropriate institutional commitment to fostering the applicant’s integrated training as a physician-scientist or other clinician-scientist? Does this commitment extend to support the applicant’s research and training, if needed, for the duration of the proposed award?

- Your sponsor likely has “boiler plate” text about their lab space and equipment which you can easily modify for your fellowship application.
• Include descriptions of core facilities relevant to your work.
• Describe plans to participate in departmental seminar series, journal clubs, and departmental retreats or forums that provide opportunities for interaction with colleagues and demonstrate engagement in your scientific community.
• Describe plans to participate in career development activities such as career programs and grant workshops, such as those sponsored by the BRET Office of Career Development.
• “Boiler plate” text may be available describing workshops and programs in which you plan to participate. It isn’t advised to use the text verbatim. Select which experiences you highlight very carefully, and tailor the information to your specific situation and write the information in your own “voice.” Study sections can spot “boiler plate” text easily, and this works against the idea that you and your advisor have spent time customizing the training plan to your specific needs.
Grantsmanship Tips from the NIH

http://grants.nih.gov/grants/writing_application.htm

* The instructions require that materials be organized in a particular format. Reviewers are accustomed to finding information in specific sections of the application. Organize your application to effortlessly guide reviewers through it. This creates an efficient evaluation process and saves reviewers from hunting for required information.

* Think like a reviewer. A reviewer must often read 10 to 15 applications in great detail and form an opinion about each of them. Your application has a better chance at being successful if it is easy to read and follows the usual format. Make a good impression by submitting a clear, well-written, properly organized application.

* Start with an outline following the suggested organization of the application.

* Be complete and include all pertinent information.

* Be organized and logical. The thought process of the application should be easy to follow. The parts of the application should fit together.

* Write one sentence summarizing the topic of each main section. Do the same for each main point in the outline.

* Make one point per paragraph for readability. Keep sentences to 20 words or less. Write simple, clear sentences.

* Be realistic. Don't propose more work than can be reasonably done during the proposed project period.

* Include enough background information to enable an intelligent reader to understand your proposed work.

* A cover letter helps the Division of Receipt and Referral in the Center for Scientific Review assign your application for initial peer review and to an IC for possible funding.

* Use the active, rather than passive, voice. For example, write "We will develop an experiment," not "An experiment will be developed."

* Use a clear and concise writing style so that a non-expert may understand the proposed research. Make your points as directly as possible. Use basic English, avoiding jargon or excessive language. Be consistent with terms, references and writing style.

* Spell out all acronyms on first reference.

* Allow sufficient time to put the completed application aside, and then edit it from a fresh vantage point. Try proofreading by reading the application aloud.

* Allow time for an internal review by mentors and make revisions/edits from that review. If possible, have both experts in your field and those who are less familiar with your science provide feedback. The application should be easy to understand by all.
* It is a good idea to have an independent expert provide an objective critique of your application. If possible, arrange for neutral third-party reviewers.

* Have zero tolerance for typographical errors, misspellings, grammatical mistakes or sloppy formatting. A sloppy or disorganized application may lead the reviewers to conclude that your research may be conducted in the same manner.

* Prior to submission, perform a final proofread of the entire grant application.

**Remember the Details!** Below are tips to assist you in meeting the requirements on font, font size, margins and spacing. Be sure to follow the format in the instructions and label sections as requested.

* Use an Arial, Helvetica, Palatino Linotype, or Georgia typeface, a black font color, and a font size of 11 points or larger. (Symbol fonts may be used to insert Greek letters or special characters; the font size requirement still applies.)

* Type density, including characters and spaces, must be no more than 15 characters per inch. Type may be no more than six lines per inch. Use standard paper size (8 ½" x 11). Use at least one-half inch margins on all sides for all pages. No information should appear in the margins.

* Use sub-headings, short paragraphs, and other techniques to make the application as easy to navigate as possible. Be specific and informative, and avoid redundancies.

* Use diagrams, figures and tables, and include appropriate legends, to assist the reviewers to understand complex information. These should complement the text and be appropriately inserted. Make sure the figures and labels are readable in the size they will appear in the application.

* Use bullets and numbered lists for effective organization. Indents and bold print add readability. Bolding highlights key concepts and allows reviewers to scan the pages and retrieve information quickly. Do not use headers or footers.

* Identify weak links in your application so the application you submit is solid, making a strong case for your project.

* If writing is not your forte, seek help!
Update on Requirement for Instruction in the Responsible Conduct of Research


Notice Number: NOT-OD-10-019, Release Date: November 24, 2009, Issued by National Institutes of Health (NIH)

Definition: For the purpose of this Notice, RCR is defined as the practice of scientific investigation with integrity. It involves the awareness and application of established professional norms and ethical principles in the performance of all activities related to scientific research.

Basic Principles: The following principles are based on several key concepts about RCR and best practices that have evolved over the past two decades’ experiences: 1) RCR is an essential component of research training. Therefore, instruction in RCR is an integral part of all research training programs, and its evaluation will impact funding decisions. 2) Active involvement in the issues of RCR should occur throughout a scientist’s career. RCR instruction should therefore be appropriate to the career stage of the individuals receiving training. 3) Individuals supported by fellowships and career development awards are encouraged to assume individual and personal responsibility for their instruction in RCR. 4) Research faculty of the institution should participate in instruction in RCR in ways that allow them to serve as effective role models for their trainees, fellows, and scholars. 5) Instruction should include face-to-face discussions by course participants and faculty; i.e., on-line instruction may be a component of instruction in RCR but is not sufficient to meet the NIH requirement for such instruction, except in special or unusual circumstances. 6) RCR instruction must be carefully evaluated in all NIH applications for which it is a required component.

Instructional Components: NIH recognizes that RCR instruction occurs formally and informally in educational settings and that informal instruction occurs throughout the research training experience. The guidance provided is directed at formal instruction in RCR. It reflects accumulated experience and best practices of the scientific community over the past two decades. These practices have been incorporated into many of the best regarded programs of RCR instruction.

Format: Substantial face-to-face discussions among the participating trainees/fellows/scholars/participants; a combination of didactic and small-group discussions (e.g. case studies); and participation of research training faculty members in instruction in RCR are highly encouraged. While on-line courses can be a valuable supplement to instruction in RCR, online instruction is not considered adequate as the sole means of instruction. A plan that employs only online coursework for instruction in RCR will not be considered acceptable.

Subject Matter: While there are no specific curricular requirements for instruction in RCR, the following topics have been incorporated into most acceptable plans for such instruction:

- conflict of interest – personal, professional, and financial
- policies regarding human subjects, live vertebrate animal subjects in research, and safe laboratory practices
- mentor/mentee responsibilities and relationships
- collaborative research including collaborations with industry
- peer review
- data acquisition and laboratory tools; management, sharing and ownership
• research misconduct and policies for handling misconduct
• responsible authorship and publication
• the scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research

While courses related to professional ethics, ethical issues in clinical research, or research involving vertebrate animals may form a part of instruction in RCR, they generally are not sufficient to cover all of the above topics. Additional detail regarding subject matter is available under Resources.

**Faculty Participation:** Training faculty and sponsors/mentors are highly encouraged to contribute both to formal and informal instruction in RCR. Informal instruction occurs in the course of laboratory interactions and in other informal situations throughout the year. Training faculty may contribute to formal instruction in RCR as discussion leaders, speakers, lecturers, and/or course directors. Rotation of training faculty as course directors, instructors, and/or discussion leaders may be a useful way to achieve the ideal of full faculty participation in formal RCR courses over a period of time.

**Duration of Instruction:** Instruction should involve substantive contact hours between the trainees/fellows/scholars/participants and the participating faculty. Acceptable programs generally involve at least eight contact hours. A semester-long series of seminars/programs may be more effective than a single seminar or one-day workshop because it is expected that topics will then be considered in sufficient depth, learning will be better consolidated, and the subject matter will be synthesized within a broader conceptual framework.

**Frequency of Instruction:** Reflection on RCR should recur throughout a scientist’s career: at the undergraduate, post-baccalaureate, predoctoral, postdoctoral, and faculty levels. Institutional training programs and individual fellows/scholars are strongly encouraged to consider how to optimize instruction in RCR for the particular career stage(s) of the individual(s) involved. Instruction must be undertaken at least once during each career stage, and at a frequency of no less than once every four years. It is highly encouraged that initial instruction during predoctoral training occurs as early as possible in graduate school. To meet the above requirements, instruction in RCR may take place, in appropriate circumstances, in a year when the trainee, fellow or career award recipient is not actually supported by an NIH grant. This instruction can be documented as described below.

**Special Considerations for Individual awards:** In keeping with the individual nature of these programs, fellows and scholars, along with their institutions and sponsors/mentors, are encouraged to tailor instruction in RCR to the needs of the individual. Thus, instruction may go beyond formal institutional courses and provide opportunities for the individual to develop their own scholarly understanding of the ethical issues associated with their research activities and their impact on society. An individualized plan would also be appropriate in the rare instance where an institution does not have an established formal mechanism for such instruction.

**Application Procedures for Individual Applications:** New (Type 1) applications must include a section on instruction in RCR, appropriate to the career stage of the applicant (instruction for applicants in the early stages of their careers; participation as course directors, lecturers, or discussion leaders for applicants in middle or senior stages of their careers), as part of the Research Training Plan or Candidate Information and Career Development Plan. This section will document prior participation or instruction in RCR during the applicant’s current career stage (including the date instruction was last completed) and propose plans to either receive instruction in RCR or participate as a course lecturer, etc., depending on the applicant’s career stage. Such plans must address the five instructional components outlined above. The plan may include career stage-appropriate,
individualized instruction or independent scholarly activities that will enhance the applicant’s understanding of ethical issues related to their specific research activities and the societal impact of that research. The role of the sponsor/mentor in instruction in RCR must be described.

Applications lacking a plan for instruction in RCR will be considered incomplete and may be delayed in the review process or not reviewed.

**Peer Review:** Reviewers will evaluate plans for instruction in RCR as well as the past record of instruction in RCR, where applicable. Reviewers will specifically address the five Instructional Components (Format, Subject Matter, Faculty Participation, Duration and Frequency) taking into account the characteristics of institutional programs or the unique circumstances outlined for short-term training programs, individual fellowships, career awards, and research education programs. The review will be guided ultimately by the principles set forth at the beginning of this Notice.

The plan for instruction in RCR and the past record of instruction in RCR, where applicable, will be discussed after the overall determination of merit of the application at large; the review panel’s evaluation of the plan will not be a factor in the determination of the impact/priority score. Plans and past record will be rated as ACCEPTABLE or UNACCEPTABLE. The results of the review of the plan for instruction in RCR and the past record of instruction in RCR, where applicable, will be reported as an administrative note in the summary statement and will explain how the review panel determined its rating. Regardless of the impact/priority score, applications with unacceptable plans will not be funded until the applicant provides an acceptable, revised plan. Institute or Center staff will apply the principles set forth at the beginning of this Notice to determine the acceptability of the revised plan.

**Compliance:** NIH policy requires participation in and successful completion of instruction in RCR by individuals supported by any NIH fellowship award. It is expected that course attendance is monitored and that a certificate or documentation of participation is available upon course completion. NIH does not require certification of compliance or submission of documentation, but expects institutions to maintain records.

**Resources:** The NIH Research Training website (http://grants.nih.gov/training/extramural.htm) includes additional information on instruction in RCR and links to the Office of Research Integrity (http://ori.hhs.gov/), links to instructional materials, and examples of programs that have been regarded as good models for instruction in RCR (http://bioethics.od.nih.gov/researchethics.html). The National Academy Press has just published the 3rd. edition of the classic, On Being a Scientist, and is available online at http://books.nap.edu/catalog.php?record_id=12192.

**Questions concerning this Notice should be directed to:** Rod Ulane, Ph.D., NIH Research Training Officer, Director, Division of Scientific Programs, Office of Extramural Programs, National Institutes of Health, Phone: 301-496-3255, Email: ulanere@mail.nih.gov
If you understand how NRSA fellowship applications are reviewed, you can write with your reader – the scientist who will peer review your application - in mind. Learn more about the peer review process using the links below.

- List of study sections that review NRSA fellowship applications
- What happens to your application during and after review
- Insider’s guide to peer review
- Review criteria at-a-glance
- Scoring system and procedures
- Definitions of criteria and considerations for F critiques

The NIH gives the reviewers the following guidance for reading and scoring fellowship applications.

- F30 – Guide for Reviewers
- F31 – Guide for Reviewers
- F31 Diversity – Guide for Reviewers
- F32 – Guide for Reviewers
Additional web links for NRSA fellowships

Always check the NIH website for the most up-to-date notices and information about NRSA policy issues: http://grants1.nih.gov/training/nrsa.htm#policy. Important policy issues include:

- Clarification regarding additional educational information required for predoctoral fellowships (F30: NOT-OD-14-090, F31 NOT-OD-14-094: F31 diversity NOT-OD-14-095)
- Institutions encouraged to adopt Individual Development Plans for all NIH-funded predoctoral and postdoctoral fellows (NOT-OD-13-093)
- Letter required with application for F31 diversity predoctoral fellowships (NOT-OD-11-046)
- Policy on post-submission updates on a sponsor’s research funding (NOT-OD-12-022)
- Modification of eligibility criteria for F32 postdoctoral NRSA (relates to remaining at the same institution for pre- and postdoctoral training; NOT-OD-11-097)
- Instructions for describing hiatus in training or reduced productivity (NOT-OD-11-050)

The NIH requires fellowship applications to use a specific biosketch template which is distinct from the biosketch template that investigators use for research grant applications, so make sure you use the right one!

NIAID/NIH has a sample F31 Diversity Fellowship application and summary statement on their website. This sample application is informative even if you are applying for a different type of F Fellowship.

NIH RePORTER database (http://projectreporter.nih.gov/reporter.cfm) can be used to: (1) view examples of abstracts and titles of funded projects; (2) find other VU grad students and postdocs with funded NRSAs to seek their advice; (3) make sure your research hasn’t been proposed by someone else!

Index of Study Section Rosters that Review NRSA Fellowship Applications, from Center for Scientific Review http://www.csr.nih.gov/Roster_proto/Fellowship_section.asp

Video of a mock study section meeting from the Center for Scientific Review http://cms.csr.nih.gov/ResourcesforApplicants/InsidetheNIHGrantReviewProcessVideo.htm

Description of Responsible Conduct of Research training sponsored by BRET office, and archive of past RCR programs at http://bret.mc.vanderbilt.edu/bret/php_files/rcr.php

BRET “boiler plate text” summarizes resources available through the BRET Office, including the BRET Office of Career Development, BRET Office of Postdoctoral Affairs, and the BRET-sponsored annual RCR training. Log in to view summaries and download event schedules and brochures: https://medschool.mc.vanderbilt.edu/bret_boiler/index.php

Payback agreements (required for F32 fellowships only): http://grants1.nih.gov/training/payback.htm

Fellowship Advice and FAQs from NIH institutes and centers
Main NIH Fellowships advice page: http://grants.nih.gov/training/faq_fellowships.htm

Glossary of NIH Abbreviations and Definitions of Grant-Related Terms http://grants.nih.gov/grants/policy/nihgps_2003/nihgps_Part2.htm#matching_or_cost_sharing