

Details of Application Changes for Fellowships (for due dates on or after January 25, 2010)

June 2, 2010

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Introduction

One of the priorities of the NIH Enhancing Peer Review initiative is to *Improve the Quality and Transparency of Review*. One of the goals associated with this priority is to shorten the application and align it with review criteria.

Restructured application packages and instructions are required for all applications submitted for due dates on or after January 25, 2010. Changes were announced in [NOT-OD-09-149](#) and [NOT-OD-10-002](#).

This document provides details of applications changes to **Fellowships**. Details of application changes to other types of applications are provided via the [Restructured Applications page](#) of the [Enhancing Peer Review Web site](#).

Shortened Page Limits

Shortened page limits are described in detail at the [Table of Page Limits](#).

Alignment of the Application with Review Criteria

Many of the changes to the application were made to coordinate with review criteria used by reviewers in their assessment of scientific and technical merit. Table 1 shows the scored Enhanced Review Criteria for fellowships, as included in the parent announcements for Fellowships, [PA-10-107](#), [PA-10-108](#), [PA-10-109](#), [PA-10-110](#), and [PA-10-111](#).

Table 1: Enhanced Review Criteria for Fellowships

Name	Description
Overall Impact	Reviewers will provide an overall impact/priority score to reflect their assessment of the likelihood that the fellowship will enhance the candidate's potential for, and commitment to, a productive independent scientific research career in a health-related field, in consideration of the scored and additional review criteria.
Fellowship Applicant	Are the applicant's academic record and research experience of high quality? Does the applicant have the potential for, and commitment to, becoming an important contributor to

Name	Description
	biomedical, behavioral or clinical science as a physician-scientist or clinician-scientist?
Sponsors, Collaborators, and Consultants	Are the sponsor's research qualifications (including successful competition for research support) and track record of mentoring appropriate for the proposed fellowship? Are 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? 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?
Research Training Plan	<p>F30. Is the proposed research plan of high scientific quality, and does it relate to the applicant's training plan? Is the training plan consistent with the candidate's stage of research development? Will the research training plan provide the applicant with individualized and supervised experiences that will develop research skills needed for an independent researcher and physician-scientist or clinician-scientist?</p> <p>F31 Diversity. <i>For beginning graduate students who have not yet developed a dissertation research project:</i> Is the description of research interests detailed and well-articulated, and how well does it relate to career objectives? Is the training plan consistent with the applicant's stage of research development? Will the training plan provide the applicant with individualized and supervised experiences that will develop research skills needed in preparation for his/her research career?</p> <p><i>For graduate students who have developed a dissertation research project:</i> Is the proposed research plan of high scientific quality, and does it relate to the applicant's training plan? Is the training plan consistent with the candidate's stage of research development? Will the research training plan provide the applicant with individualized and supervised experiences that will develop research skills needed in preparation for his/her research career? Does the research plan address scientific significance, originality, and feasibility?</p> <p>F31 and F32. Is the proposed research plan of high scientific quality, and does it relate to the applicant's training plan? Is the training plan consistent with the candidate's stage of research development? Will the research training plan provide the applicant with individualized and supervised experiences that will develop research skills needed for his/her independent and productive research career?</p> <p>F33. Is the proposed research plan of high scientific quality, and does it relate to the applicant's career plan? Will the research training plan provide the applicant with proper experience to develop research skills needed in preparation for his/her research career? Will the research training plan provide the applicant with individualized and supervised experiences that will develop research skills needed for his/her independent and productive research career?</p>
Training Potential	Does the proposed research training plan have the potential to provide the fellow with the requisite individualized and supervised experiences that will develop his/her research skills? Does the proposed research training have the potential to serve as a sound foundation that will lead the fellow to an independent and productive career?
Institutional Environment & Commitment to Training	<p>F30. Are the research facilities, resources (e.g. equipment, laboratory space, computer time, subject populations), and training opportunities adequate and appropriate? Is the institutional environment for the scientific development of the applicant of high quality, and is there appropriate institutional commitment to fostering the fellows' training as a physician-scientist or clinician-scientist?</p> <p>F31 Diversity, F31, F32, and F33. Are the research facilities, resources (e.g. equipment, laboratory space, computer time, subject populations), and training opportunities adequate and</p>

Name	Description
	appropriate? Is the institutional environment for the scientific development of the applicant of high quality, and is there appropriate institutional commitment to fostering the fellows' training as an independent and productive researcher?

Tables 2 – 4 provide the text of the current application instructions in the right column, aligned with the corresponding restructured application instructions in the left column; revised text is indicated by **Emphasis**.

Table 2: Instructions for Selected Sections of the Research Training Plan

PHS 398 Fellowship Supplemental Form (Section 5.3 of the SF 424 (R&R) Individual Fellowship Application)

Restructured Application Instructions (New Language)	Former Application Instructions
<p>1. Introduction (Resubmission Applications only)</p> <p>Attach for all resubmission applications an Introduction of no more than one page that summarizes the substantial additions, deletions, and changes. The Introduction must also include responses to criticisms and issues raised in the summary statement for the previous application. See specific instructions in Part I Section 2.7, Resubmission Applications, on the content of the Introduction.</p> <p>The Introduction is limited to one page unless specified in the FOA.</p> <p>First time (new) applications should not include an Introduction unless specified in the FOA.</p>	<p>1. Introduction (Resubmission Applications only)</p> <p>Attach for all resubmission applications an Introduction of no more than one page that summarizes the substantial additions, deletions, and changes. The Introduction must also include responses to criticisms and issues raised in the summary statement for the previous application.</p>
<p>2. Specific Aims</p> <p>State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved.</p> <p>List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.</p> <p>Specific Aims are limited to one page.</p>	<p>2. Specific Aims</p> <p>Attach a list of the broad, long-term objectives and the goal of the specific research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.</p>
<p>3. Research Strategy</p> <p>Organize the Research Strategy in the specified order using the instructions provided below. Start each section with the appropriate section heading—Significance, Innovation, Approach. Cite published experimental details in the Research Strategy section and provide the full reference in the Bibliography and References Cited section (Part I Section 4.4.9).</p>	

Restructured Application Instructions (New Language)	Former Application Instructions
<p>Research Strategy is limited to six pages.</p> <p>Follow the page limits for the Research Strategy in the table of page limits (Table 2.6-1), unless specified otherwise in the FOA. Note that the page limit for this attachment will be validated as a single file.</p> <p>(a) Significance</p> <ul style="list-style-type: none"> • Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses. • Explain how the proposed project will improve scientific knowledge, Technical capability, and/or clinical practice in one or more broad fields. • Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be affected if the proposed aims are achieved. <p>(b) Innovation</p> <ul style="list-style-type: none"> • Fellowship applications should not include an Innovation section unless specified in the FOA. <p>(c) Approach</p> <ul style="list-style-type: none"> • Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Unless addressed separately in Item 16 (Resource Sharing Plan), include how the data will be collected, analyzed and interpreted as well as any resource sharing plans as appropriate. • Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims. • If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high risk aspects of the proposed work. • Point out any procedures, situations, or materials that may be hazardous to personnel and the precautions to be exercised. A full discussion on the use of Select Agents should appear in Item 15, below. • Include any courses that you plan to take to support the research training experience. <p>If an applicant has multiple Specific Aims, then the applicant may address Significance, Innovation and Approach for each Specific Aim individually, or may</p>	<p>3. Background and Significance</p> <p>Attach a brief sketch of the background leading to the present application. Critically evaluate existing knowledge and specifically identify the gaps that the project is intended to fill. State concisely the importance and health relevance</p> <p>5. Research Design and Methods</p> <p>Attach a description of the research design conceptual or clinical framework, procedures, and analyses to be used to accomplish the specific aims of the project. Include how the data will be collected, analyzed, and interpreted. Describe any new methodology and its advantage over existing methodologies. Describe any novel concepts, approaches, tools, or technologies for the proposed studies. Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims. As part of this section, provide a tentative sequence or timetable for the project. Point out any procedures, situations, or materials that may be hazardous to personnel and the precautions to be exercised. Include any courses that you plan to take to support the research training experience.</p>

Restructured Application Instructions (New Language)	Former Application Instructions
<p>address Significance, Innovation and Approach for all of the Specific Aims collectively.</p> <p>As applicable, also include the following information as part of the Research Strategy, keeping within the three sections listed above: Significance, Innovation, and Approach.</p> <p><u>Preliminary Studies.</u> For new applications, include information on preliminary studies, if any. Discuss the applicant's preliminary studies, data and/or experience pertinent to this application. When applicable, provide a succinct account of published and unpublished results, indicating progress toward their achievement.</p> <p><u>Progress Report for Renewal Applications.</u> Renewal applications for individual fellowships are rare. You should consult with your program official before preparing such an application.</p> <p>In the rare instance that you are submitting a renewal application, provide a Progress Report. Provide the beginning and ending dates for the period covered since the last competitive review. Summarize the specific aims of the previous project period and the importance of the findings, and emphasize the progress made toward their achievement. Explain any significant changes to the specific aims and any new directions including changes resulting from significant budget reductions.</p> <p>A list of publications, manuscripts accepted for publication, patents, and other printed materials should be included in Section 5; do not include that information here.</p> <p>In the rare instance that you are submitting a renewal application, and it involves clinical research, then you must report on the enrollment of research subjects and their distribution by ethnicity/race and sex/gender. See Part II, Section 4.3 for more detailed instructions on which Target and Enrollment Report or Table to use. (Not part of the page limitations of the Research Training Plan.)</p> <p>If submitting a resubmission of a renewal, this upload will not be available. Instead, the Inclusion Enrollment Report required in the PHS Fellowship Supplemental Form component (Item 4) should be saved as an individual pdf file titled "Inclusion_Enrollment_Report.pdf" and attached in Item 12 (Other Attachments) of the SF424 (R&R) Other Project Information component.</p>	<p>5.3.4. Preliminary Studies/Progress Report</p> <p><u>Preliminary Studies.</u> For new applications, use this section to provide an account of the PD/PI's preliminary studies pertinent to this application, including preliminary experience with and outreach to the proposed racial/ethnic group members. This information will also help to establish the experience and competence of the investigator to pursue the proposed project.</p> <p><u>Progress Report for Competing Continuation Applications.</u> Competing continuation applications for individual fellowships are rare. You should consult with your program official before preparing such an application. If you are submitting a Competing Continuation, you must attach a Progress Report. Provide the beginning and ending dates for the period covered since the project was last reviewed competitively. Summarize the previous application's specific aims and the importance of the findings.</p>

Table 3: Instructions for Facilities & Other Resources

Section 4.4, Item 10 of the SF 424 (R&R) Individual Fellowship Application


Restructured Application Instructions (New Language)	Former Application Instructions
<p>This information is used to assess the capability of the organizational resources available to perform the effort proposed.</p> <ul style="list-style-type: none"> Identify the facilities to be used (laboratory, clinical, animal, computer, office, other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Provide any information describing the Other Resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. No special form is required but this section must be completed and attached for submissions to NIH and other PHS agencies unless otherwise noted in an FOA. Describe how the scientific environment in which the research will be done contributes to the probability of success (e.g., institutional support, physical resources, and intellectual rapport). In describing the scientific environment in which the work will be done, discuss ways in which the proposed studies will benefit from unique features of the scientific environment or subject populations or will employ useful collaborative arrangements. If there are multiple performance sites, describe the resources available at each site. Describe any special facilities used for working with biohazards or other potentially dangerous substances. Note: Information about Select Agents must be described in the Research Training Plan, Item 15 (Select Agent Research). 	<p>4.4 Other Project Information Component Item 9 – Facilities & Other Resources</p> <p>This information is used to assess the capability of the organizational resources available to perform the effort proposed. Identify the facilities to be used (Laboratory, Animal, Computer, Office, Clinical and Other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Provide any information describing the Other Resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. Please click the add attachment button to the right of this field to complete this entry.</p>  <p>No special form is required but this section must be completed and attached for submissions to NIH and other PHS agencies unless otherwise noted in an FOA. If there are multiple performance sites, then resources available at each site should be described. In describing the scientific environment in which the work will be done, discuss ways in which the proposed studies will benefit from unique features of the scientific environment, or subject populations or employ useful collaborative arrangements. If research involving Select Agent(s) will occur at any performance site(s), the biocontainment resources available at each site should be described.</p>

Table 4: Instructions for the Biographical Sketch

Section 4.5 of the SF 424 (R&R) Individual Fellowship Application

Restructured Application Instructions (New Language)	Former Application Instructions
<p>A. Personal statement. Briefly describe why your experience and qualifications make you particularly well-suited for your role as a fellowship applicant.</p>	

Restructured Application Instructions (New Language)	Former Application Instructions
<p>B. Positions and Honors. List in chronological order all non-degree training, including postdoctoral research training, all employment after college, and any military service. Clinicians should include information on internship, residency and specialty board certification (actual and anticipated with dates) in addition to other information requested. This information is used in reviewing the application and in determining the stipend level for Postdoctoral Fellowships. State the Activity/Occupation and include beginning/end dates, field, name of institution/company, and the name of your supervisor/employer.</p> <p>List any academic and professional honors that would reflect upon your potential for a research career and qualifications for an individual fellowship. Include all scholarships, traineeships, fellowships, and development awards other than Kirschstein-NRSA. Indicate sources of awards, dates, and grant or award numbers. List current memberships in professional societies, if applicable.</p> <p>C. Publications. List your entire bibliography, separating research papers, abstracts, book chapters, and reviews. Within each subsection the list should be chronological. <i>If the list of publications cannot be accommodated within the four-page biosketch limit, select only the most pertinent publications or limit the list to no more than 15 publications.</i> For each publication, list the authors in published sequence, full title of article, journal, volume number, page numbers, and year of publication. Indicate if you previously used another name that is reflected in any of the citations. URLs or NIH PubMed Central (PMC) submission identification numbers may be included along with the full reference. While there is no limit to the number of URLs or PMC submission identification numbers that can be cited, applicants should be both judicious and concise. Manuscripts listed as “pending publication” or “in preparation” should be included and identified.</p>	<p>Positions and Honors. List in chronological order all non-degree training, including postdoctoral research training, all employment after college, and any military service. Clinicians should include information on internship, residency and specialty board certification (actual and anticipated with dates) in addition to other information requested. This information is used in reviewing the application and in determining the stipend level for Postdoctoral Fellowships. State the Activity/Occupation and include beginning/end dates, field, name of institution/company, and the name of your supervisor/employer.</p> <p>List any academic and professional honors that would reflect upon your potential for a research career and qualifications for an Individual Fellowship. Include all scholarships, traineeships, fellowships, and development awards other than Kirschstein-NRSA. Indicate sources of awards, dates, and grant or award numbers. List current memberships in professional societies, if applicable.</p> <p>Publications</p> <p>List your entire bibliography, separating research papers, abstracts, book chapters, and reviews. Within each subsection the list should be chronological. <i>If the list of publications cannot be accommodated within the four-page biosketch limit, select only the most pertinent publications.</i> For each publication, list the authors in published sequence, full title of article, journal, volume number, page numbers, and year of publication. Indicate if you previously used another name that is reflected in any of the citations. URLs or NIH PubMed Central (PMC) submission identification numbers may be included along with the full reference. While there is no limit to the number of URLs or PMC submission identification numbers that can be cited, applicants should be both judicious and concise. Manuscripts listed as “pending publication” or “in preparation” should be included and identified.</p>

Restructured Application Instructions (New Language)	Former Application Instructions
<p>D. Scholastic Performance. Predoctoral applicants: Using the chart provided, list by institution and year all undergraduate and graduate courses with grades.</p> <p>In addition, in the space following the chart, explain any marking system if other than 1-100, A, B, C, D, F, or 0-4.0 if applicable. Show levels required for a passing grade. At the bottom of the page, Predoctoral applicants must also provide scores for the Graduate Record Examination (GRE), if available; and MD/PhD applicants should type in their MCAT scores, if available.</p> <p>Postdoctoral applicants: Using the chart provided, list by institution and year all undergraduate courses and graduate scientific and/or professional courses germane to the training sought under this award with grades. In the space following the chart, explain any marking system if other than 1-100, A, B, C, D, F, or 0-4.0 if applicable. Show levels required for a passing grade.</p> <p>Predoctoral and postdoctoral applicants may be asked to send transcripts prior to award. Unless specified in a particular announcement (RFA/PA), do not include transcripts with the application.</p> <p>Indicate if you previously used another name that is reflected in any of the citations. Manuscripts listed as “pending publication” or “in preparation” should be included and identified.</p>	<p>Scholastic Performance</p> <p>Predoctoral applicants: Using the chart provided, list by institution and year all undergraduate and graduate courses with grades.</p> <p>In addition, in the space following the chart, explain any marking system if other than 1-100, A, B, C, D, F, or 0-4.0 if applicable. Show levels required for a passing grade. At the bottom of the page, Predoctoral applicants must also type in their scores for the Graduate Record Examination (GRE), if available; and M.D./Ph.D. applicants should type in their MCAT scores, if available.</p> <p>Postdoctoral applicants: Using the chart provided, list by institution and year all undergraduate courses and graduate scientific and/or professional courses germane to the training sought under this award with grades. In the space following the chart, explain any marking system if other than 1-100, A, B, C, D, F, or 0-4.0 if applicable. Show levels required for a passing grade.</p> <p>Predoctoral and postdoctoral candidates may be asked to send transcripts prior to award. Unless specified in a particular announcement (RFA/PA), do not include transcripts with the application.</p> <p>Indicate if you previously used another name that is reflected in any of the citations. Manuscripts listed as “pending publication” or “in preparation” should be included and identified.</p>

NOTE: This document provides only the details of application changes that are related to Peer Review Enhancements. Other application changes for due dates on or after January 25, 2010 include those [required by the Federal Funding Accountability and Transparency Act \(FFATA\)](#).