

# NIH NRSA F30/F31 Essential Document Checklist

| Document   | Max<br>Length    | Resources                                  | Draft | Final |
|--|------------------|--|-------|-------|
| Title of Project   |                  |  |       |       |
| Project Summary/Abstract   | 30 lines of text |  |       |       |
| Project Narrative  | 3<br>sentences   |  |       |       |
| Respective Contributions   | 1 page           |  |       |       |
| Cover Letter with List of Reference Letter Writers   | 1 page           |  |       |       |
| Specific Aims  | 1 page           |  |       |       |
| Research Strategy  | 6 pages          |  |       |       |
| Bibliography & References Cited  |                  |  |       |       |
| Biosketch  | 5 pages          |  |       |       |
| Selection of Sponsor and Institution   | 1 page           |  |       |       |
| Background & Goals for Fellowship Training   | 6 pages          |  |       |       |
| Sponsor Biosketch  | 5 pages          | Advisor                                    |       |       |
| Sponsor/Co-Sponsor Statement   | 6 pages          | Advisor                                    |       |       |
| Letters of Support from Collaborators,<br>Contributors, and Consultants (if<br>applicable) | Up to 6 pages    | Collaborators / Contributors / Consultants |       |       |
| Description of Institutional Environment and Commitment to Training                        | 2 pages          | DGS / department admin                     |       |       |
| Training in Responsible Conduct of Research  | 1 page           | DGS / department admin/senior students     |       |       |
| Description of Candidate's Contribution to Program Goals (F31 – Diversity only)            |                  | DGS / department admin                     |       |       |
| Facilities & Other Resources   |                  | Advisor / senior students                  |       |       |
| Resources Sharing Plan   |                  | Advisor / senior students                  |       |       |
| Equipment  |                  | Advisor / senior students                  |       |       |
| Vertebrate Animals (if applicable)   |                  | Advisor / senior students                  |       |       |
| Human Subjects (if applicable)   |                  | Advisor / senior students                  |       |       |
| Select Agents (if applicable)  |                  | Advisor / senior students                  |       |       |

# **Application Components You Have to Write**

### Project Summary/Abstract (30 lines)

- Project's intellectual significance and relevance to human health
- Brief description of what is known about your research question
- How your project will address the research question and connect to human health
- Note: this text will be published on a public NIH database

### **Project Narrative** (3 sentences)

- Very brief description of research question you are addressing, understandable to a layperson
- What your results will add to knowledge about a particular disease or question
- Note: this text will be published on a public NIH database

### **Respective Contributions** (1 page)

- Delineate your role in obtaining preliminary data generated for your proposal, and data obtained from someone else
- Describe the process you and your sponsor/co-sponsors used to write the Research Strategy

# Cover Letter (1 page)

- Application title
- List specific funding opportunity title of the NIH initiative
- Specify which institute to direct the proposal, study section if desired
- List disciplines involved, if multidisciplinary
- List your reference letter writers and their professional affiliations

### **Specific Aims** (1 page)

- This and the *Research Strategy* are two of the most important parts of your application—some reviewers will read every section, but all reviewers will read these.
- This document briefly outlines the background, significance, hypothesis, specific goals, and experimental plan that will be explained in detail in the Research Strategy.

### **Research Strategy** (6 pages)

- This will include two main sections: Significance (includes background, the central hypothesis, and the significance of the project) and Approach (details your Aims).
- See our "Tips for Writing the Research Strategy" handout for details and advice!

# PI (Applicant) Biosketch (5 pages)

- A. Personal Statement
  - Describe your *scientific* background (not personal background) and how it has led to your current research interests and career goals.
- B. Create a narrative around how your research interest has evolved over time and identify your future goals.
- C. Positions and Honors
- D. Contributions to Science (no more than ½ page per item)
  - Describe up to five (usually 2-3) of your most significant contributions to science. Contributions that follow a similar theme can be grouped together even if they were not performed in the same lab.

- These demonstrate engagement with the academic community and development of scientific skills and knowledge, especially if they're relevant to your proposal
- For each contribution, include: title, significance, central findings or conclusions, your role, impact on progress of science or application to health and technology
- For each contribution, you can list up to 4 "research products" that are relevant to the
  contribution. These can include publications (in prep, under review, and published),
  posters, presentations, theses, patents, protocols, software, models, educational
  aids/curricula, databases, etc.

# E. Scholastic Performance

### **Selection of Sponsor and Institution** (1 page)

- Describe the training opportunities and resources available through your university and affiliated program.
- Explain how the selection of this university/program fits into applicant research interest and training plan for future career
- Explain how your sponsor's research program and field of expertise fits your goals

# Background & Goals for Fellowship Training (6 pages)

- A. Doctoral Dissertation and Other Research Experiences
  - Describe previous research experience in chronological order: highlight the significance
    of the work and major results/conclusions, how it motivated your interest in your current
    work and relates to your proposed dissertation project, and what you learned or gained
    from the experience
  - A narrative of your dissertation research: one paragraph per aim, including the goal of that aim, progress on that aim, and how you'll train to be able to complete those goals

# B. Training Goals and Objectives

- Define your career goals (these should be in scientific research). Be as specific as
  possible. For example, do you want to be a PI at an R1 academic institution, a primarily
  undergraduate institution, work in industry, etc.?
- Identify specific skills, theories, conceptual approaches you will need to achieve these. In particular, highlight skills you don't yet have, but that you plan to gain during your training—remember that this is a *training* fellowship!
- Find unique opportunities tailored to your career trajectory; these should go beyond standard degree requirements
- Discuss how the proposed research and activities will help you gain those specific skills
- Use specifics: techniques used, unique university or program environment that will foster your goals, and the mentors that will help you learn these skills
- C. Activities Planned Under this Award (this can be a table)
  - Detailed plan for each year and timeline for entire award
  - By year, list activities you will be involved in and the % of your time each will require: research, coursework, seminars, lab meetings, clinical activities, mentoring, professional development opportunities, including meetings, workshops, seminars, etc.
  - Include when each Aim, course, professional development activity, and training activity will be accomplished
  - F30 Applicants: Outline exactly when you will take medical courses and how you will split up your time (make sure it is reasonable)

### *Introduction to Resubmission* (if you're resubmitting an application; 1 page)

• This will be the first thing reviewers will see in your resubmitted application. Spend a few sentences reiterating your overall goal of the project and thanking the reviewers for the

- strengths they saw in your application, then respond to the critiques in your summary statement, making clear what changes you have made and indicating their location within the text
- Be sure to respect the reviewers and thank them for their input. Embrace the critiques and use them to improve your application!
- Also briefly indicate any new information that doesn't address the reviewers' critiques.

# **Application Components You Get From Others And Edit**

# **Sponsor Biosketch** (5 pages)

- A. Personal statement: research interests, past research accomplishments (papers, grants), number of students mentored, student publications, student placements
- B. Positions and Honors
- C. Contribution to Science
- D. Research Support

# **Sponsor/Co-sponsor Statement** (6 pages)

- If your sponsor hasn't written this document before, they should refer to this document (Fellowship Instructions for NIH- Version H) for instructions (page 66-68) and/or get an example from a colleague
- A. Research support: table of current and pending grants available to support applicant's research
- B. Previous trainees: describe up to 5
- C. Training Plan, environment, research facilities
- D. Number of trainees to be supervised (show that the PI will have time for you)
- E. Applicant's qualifications and potential for a research career

### Letters of Support from Collaborators, Consultants, or Advisors

• If any collaborators, consultants, or advisors will contribute to your planned project and training, include letters describing their anticipated role

### Description of Institutional Environment and Commitment to Training

- Describe the facilities and resources available for research
- Document a strong research program
- List intellectual interactions available (seminars, presentations, lab meetings, courses, journal clubs)
- Facilities and resources for career enhancement
- Describe your degree program (structure, milestones, courses, teaching, average time to degree, how students are monitored)
- For F30, describe clinical activities during graduate years and research activities during clinical years

### **Training in Responsible Conduct of Research** (1 page)

- Training plan for NIH ethics requirement (for example, if you plan to take or have taken the BBS
  ethics course requirement, outline the topics covered and how they were covered (texts read,
  exercises, etc)).
- List other possible ethics courses, workshops, or mentorship from sponsors.

# Description of Candidate's Contribution to Program Goals (applicable to F31-Diversity)

#### Facilities & Other Resources

- Describe the scientific environment, especially what is unique
- Institutional support: animal care and use, trainee travel grants
- Physical resources
- Personnel resources: collaborators, collegiality

### Resources Sharing Plan

 Yale has a standard Resources Sharing Plan (get this from your PI, advisor, or grants administrator). You can add to it with specifics of your work (e.g. any reagents or animals used, or data sets produced should be shared if they are unique to your study), but don't make your plan more restrictive than Yale's basic plan.

# Equipment

- List (in outline form) the equipment available to you and where it is located
- Common lab facilities: list all *common* equipment including microscopes and data processing equipment
- Core facilities: histology, sequencing, flow cytometry, etc

#### Vertebrate Animals

 Get this information from your sponsor. You should be covered under their protocols. Tailor to your grant.

# **Human Subjects**

 Get this information from your sponsor. You should be covered under their protocols. Tailor to your grant.

### Select Agents

• Consult the NIH <u>list</u> of select agents and materials. Some <u>exclusions</u> may apply. For biohazards not included in this list, provide information about storage and handling in the research strategy.