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## NIH Career Development Guide – Forms E

*This checklist is meant to be used as a tool and does not replace the detailed requirements for submission information, which are found in the SF424 (R&R) Application Packages – Career Development Instructions for NIH and Other PHS Agencies*

<https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/career-forms-e.pdf>

It is strongly recommended that Career Development applicants speak with a PHS Program Official for Institute or Center (IC)-specific guidance before preparing the application. These contacts are identified in tables associated with each FOA. In addition, a list of contacts specifically for extramural training at the NIH ICs can be found at

<https://researchtraining.nih.gov/tac-roster>

**PI Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

A “new” application must have a different title from any other PHS project submitted for the same application due date with the same PD/PI. A “resubmission” application should normally have the same title as the previous grant or application. If the specific aims of the project have significantly changed, choose a new title.

**Project Dates:** \_\_\_\_\_

Standard Due Dates for Competing Applications: <http://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/standard-due-dates.htm>

**Solicitation:** \_\_\_\_\_

Parent Announcements (For Unsolicited or Investigator-Initiated Applications, K01, K02, K08, K23, K24, K25, K99/R00): [http://grants.nih.gov/grants/guide/parent\\_announcements.htm](http://grants.nih.gov/grants/guide/parent_announcements.htm)

### Format Attachments Requirements

- must be in PDF format
- font size must be 11 points or larger (smaller text in figures, graphs, diagrams and charts is acceptable as long as it is legible)
- text color must be black with the following recommended fonts: arial, garamond, georgia, helvetica, palatino, linotype, times new roman, verdana
- do not include headers or footers in attachments
- use paper size no larger than standard letter paper size (8.5” x 11”)
- provide at least one-half inch margins (top, bottom, left, right) for all pages
- *additional formatting information can be found here:* <http://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/format-attachments.htm>

### SF 424 (R&R) Forms

**Cover Letter Attachment** (no page limit but generally 1 – 2 pages)

Attach the cover letter, addressed to the Division of Receipt and Referral, in accordance with the announcement and/or the agency specific instructions. Mentored Career Development Award applicants must include a cover letter that contains a list of referees (including name, departmental affiliation, and institution). The cover letter should no longer be used for assignment requests. The new PHS assignment form is used for that purpose. Instead the cover letter should be used to relay information such as:

- Reason for late application
- Explanation of why a subaward is not active in all periods of the proposed project
- Statements regarding agency approval documents (e.g., requests over \$500,000)
- Intent to submit a video as part of the application (NOT-OD-12-141)
- Indication that the proposed study will generate large-scale human or non-human genomic data (NOT-OD-14-111 and NOT-OD-15-027)

Full instructions pages K-29 & K-30

**Project Summary/Abstract** (30 lines of text maximum)

State the application's broad, long-term objectives and specific aims, making reference to the health relatedness of the project (i.e., relevance to the mission of the agency). Describe concisely the research design and methods for achieving the stated goals. In addition to summarizing the research project to be conducted under the career development award, describe the candidate's career development plan, the candidate's career goals, and the environment in which the career development will take place.

Full instructions pages K-39 & K-40

**Project Narrative** (2 or 3 sentence maximum)

Using no more than two or three sentences, describe the relevance of this research to public health.

Full instructions page K-40

**Bibliography & References Cited** (no page limit)

The Bibliography should include references cited Phs-398 Career Development Award supplemental Form and in the PHS Human Subjects and Clinical Trials Form. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. When citing articles that fall under the Public Access Policy, were authored or co-authored by the applicant and arose from NIH support, provide the NIH Manuscript Submission reference number or the PubMed Central (PMC) reference number for each article. Full instructions pages K-40 and K-41

**Facilities & Other Resources** (no page limit)

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 from unique subject populations or how studies 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 and any other potentially dangerous substances. Include a detailed description of the institutional facilities and resources available to the candidate. The information provided is of major importance in establishing the feasibility of the goals of the career development plan. Full instructions pages K-41 and K-42

**Equipment**

List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities. Full instructions page K-42

**Other Attachments**

Attach a file to provide additional information only in accordance with the FOA and/or agency-specific instructions.

## **R&R Senior/Key Person Profile**

Unless otherwise specified in a FOA, senior/key personnel are defined as all individuals who contribute in a substantive, meaningful way to the scientific development or execution of the project, whether or not salaries are requested. Mentored career development awards require a primary mentor, and there may also be co-mentor(s). Mentors and co-mentors should be identified as senior/key personnel even if they are not committing any specified measurable effort to the proposed project. In determining which individuals to identify as “Senior/Key,” mentored career development award applicants may wish to keep in mind that those listed as senior/key personnel on the application should not be asked to provide reference letters, as such letters are expected to be from individuals not directly involved in the application

Career Development applicants must be registered in NIH Commons with PI role at Brown University, which can be requested at <https://www.brown.edu/research/conducting-research-brown/research-administration-information-systems/nih-commons-nsf-ids>

Applicants must also have ORCID ID linked to the PD/PI's eRA Commons Personal Profile. For further information, please see [NOT-OD-19-109](#).

For Mentored awards, the Primary mentor must also have an eRA Commons username.

**Biographical Sketch** (5 page limit)

*\*see Appendix A for biographical sketch reference sheet\**

**Current and Pending Support** (3 page limit for each) – Mentor/Co-Mentor(s) only

For mentored career development award applications, you must include Current and Pending Support pages for each of the mentor and co-mentor(s) but not for the candidate. Each Current and Pending Support should include the following: project number, source, major goals, dates of approved/proposed project and Total project costs. Do not include information on percent effort/person months or on overlap.

Full Instructions pages K-58 & K-59

## **Budget**

All career development applications must use the R&R Budget Form. Refer to your FOA for information regarding allowable costs for the candidate and any allowable research development or other costs. Contact the targeted awarding component if you are uncertain about allowable amounts for the applicable career development award mechanism. Keep in mind that amounts vary with awarding components.

**Budget Justification**

Use the budget justification to provide a detailed description and justification for specific items with the Research Development Support costs (e.g., all equipment, supplies and other personnel that will be used to help achieve the career development and research objectives of this award). See *Appendix B for Budget Justification Best Practices*.

# **PHS Fellowship Supplemental Form**

**Introduction to Application** *(for resubmission only, 1 page limit)*

NIH allows a thirty-seven month window for resubmission (only one resubmission is allowed for each new, unfunded application). Include an introduction for all resubmissions that summarizes substantial additions, deletions, and changes to the application and responds to the issues and criticism raised in the summary statement. Full instructions page K-78 and

<http://grants.nih.gov/grants/policy/amendedapps.htm>

**Candidate Information and Goals for Career Development** *\*12 page limit for both Research Strategy and Candidate Information and Goals for Career Development and Research Strategy combined\**

Organize your attachment into three sections (Candidate's Background, Career Goals and Objectives, Candidate's Plan for Career Development/Training Activities during Award Period) and discuss each of the points listed on page K-81.

**Specific Aims** *(1 page limit)*

State precisely 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. 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. Full instructions page K-82

**Research Strategy** *\*12 page limit for both Research Strategy and Candidate Information and Goals for Career Development and Research Strategy combined\**

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 & References Cited section. Full instructions pages K-85 – K-87

**Progress Report Publication List** *(renewal applications only)*

Since career awards are not generally renewable, this section is not applicable.

**Training in the Responsible Conduct of Research** *(1 page limit)*

Mentored DCA applications should describe a plan to acquire instruction in the responsible conduct of research (RCR). Non-mentored (independent) CDA applications should describe a plan to obtain or provide instruction in RCR, depending on your level of experience with RCR. This section should document prior instruction or participation in RCR training during the applicant's current career stage (including the date instruction was last completed). The plan must address the five required instructional components outlined in the NIH Policy:

1. Format – the required format of instruction, i.e., face-to-face lectures, coursework, and/or real-time discussion groups (a plan with only online instruction is not acceptable)
2. Subject Matter – the breadth of subject matter, i.e., conflict of interest, authorship, data management, human subjects and animal use, laboratory safety, research misconduct, research ethics
3. Faculty Participation – the role of the mentor(s) and other faculty involvement in the instruction
4. Duration of Instruction – the total number of contact hours of instruction
5. Frequency of Instruction – instruction must occur during each career stage and at least once every four years. Full instructions pages K-88 & K-89

**Candidate's Plan to Provide Mentoring** (6 page limit)

Include only when required by the FOA (e.g., K05 and K24). The plan should provide information about both the candidate's commitment to serve as a mentor to other investigators and the candidate's previous mentoring activities.

Full instructions page K-89-90

**Plans and Statements of Mentor and Co-Mentor(s)** (6 page limit)

All mentored career development applications should identify any and all co-mentors involved with the proposed research and career development program. The mentor and co-mentor(s) must each document their role and willingness to participate in the project, and explain how they will contribute to the development of the candidate's research career. Each statement should include all of the following: (1) the plan for the candidate's training and research career development; (2) the source of anticipated support for the candidate's research project for each year of the award period; (3) the nature and extent of supervision and mentoring of the candidate, and commitment to the candidate's development that will occur during the award period; (4) the candidate's anticipated teaching load for the award period, clinical responsibilities, committee and administrative assignments, and the portion of time available for research; (5) a plan for transitioning the candidate from the mentored stage of his/her career to the independent investigator stage by the end of the project period of the award.

Full instructions pages K-90 & K-91

**Letters of Support from Collaborators, Contributors, and Consultants** (6 page limit)

Letters of support from collaborators, contributors, and consultants will be required for any such person who will contribute to the CDA application's proposed project in any substantive, meaningful way. Note that letters of support are not the same as letters of reference (also known as reference letters), which are required for some K applications.

Full instructions pages K-91 & K-92

**Description of Institutional Environment** (1 page limit)

The sponsoring institution must document a strong, well-established research program related to the candidate's area of interest, including the names of key faculty members relevant to the candidate's proposed developmental plan. Indicate how the necessary facilities and other resources will be made available for both career enhancement and the research proposed in this application. Refer to the resources description. Describe opportunities for intellectual interactions with other investigators, including courses offered, journal clubs, seminars, and presentations. Full instructions page K-92

**Institutional Commitment to Candidate's Research Career Development** (1 page limit)

The institution should provide a document on institutional letterhead that describes its commitment to the candidate and the candidate's career development, independent of the receipt of the CDA. It is also essential to document the institution's commitment to the retention, development and advancement of the candidate during the period of the award. The attachment should generally document the institution's agreement to provide adequate time, support, equipment, facilities, and resources to the candidate for research and career development activities. The institutional commitment must be dated and signed by the person who is authorized to commit the institution to the agreements and assurances listed (in most cases, this will be the dean or the chairperson of the department). Full instructions pages K-93 – K-94

### **Vertebrate Animals**

Complete this section if you answered “yes” to the question “Are Vertebrate Animals Used?” If Vertebrate Animals are involved in the project, address each of the following criteria listed below:

1. **Description of Procedures:** Provide a concise description of the proposed procedures to be used that involve vertebrate animals in the work outlined in the Research Strategy section. Identify the species, strains, ages, sex, and total numbers of animals by species, to be used in the proposed work.
2. **Justifications:** Provide justification that the species are appropriate for the proposed research. Explain why the research goals cannot be accomplished using an alternative model (e.g., computational, human, invertebrate, in vitro).
3. **Minimization of Pain and Distress:** Describe the interventions including analgesia, anesthesia, sedation, palliative care and humane endpoints to minimize discomfort, distress, pain and injury.

Full instructions page K-94 & K-95, additional information  
<http://grants.nih.gov/grants/olaw/VASchecklist.pdf>

### **Select Agent Research**

If any of the activities proposed in your application involve the use of select agents at any time during the proposed project period (list of agents: <http://www.selectagents.gov/>), either at the applicant organization or at any other performance site, address the following three points for each site at which select agent research will take place:

1. Identify the select agent(s) to be used in the proposed research.
2. Provide the registration status of all entities where select agent(s) will be used.
3. Provide a description of all facilities where the select agent(s) will be used.

Full instructions page K-95 – K-96

### **Consortium/Contractual Arrangement**

Explain the programmatic, fiscal, and administrative arrangements to be made between the applicant organization and the consortium organization(s). The Letter of Intent from the Consortium site is uploaded here. Full instructions page K-96

### **Resource Sharing Plan**

When resources have been developed with NIH funds and the associated research findings published or provided to NIH, it is important that they be made readily available for research purposes to qualified individuals within the scientific community. See Full Instructions Page K-97 and in the NIH Grants Policy Statement,  
[https://grants.nih.gov/grants/policy/nihgps/HTML5/section\\_8/8.2.3\\_sharing\\_research\\_resources.htm](https://grants.nih.gov/grants/policy/nihgps/HTML5/section_8/8.2.3_sharing_research_resources.htm)

### **Authentication of Key Biological and/or Chemical Resources** *(limit 1 page)*

If applicable to the proposed science, briefly describe methods to ensure the identity and validity of key biological and/or chemical resources used in the proposed studies. Key biological and/or chemical resources may or may not be generated with NIH funds and: 1) may differ from laboratory to laboratory over time; 2) may have qualities and/or qualifications that could influence the research data; and 3) are integral to the proposed research. These include, but are not limited to, cell lines, specialty chemicals, antibodies, and other biologics. Full instructions page K-97

## □ **Appendix**

A maximum of 10 PDF attachments is allowed in the appendix. Do not use the appendix to circumvent the page limits of the Research Strategy or any other section of the application for which a page limit applies. *Beginning with applications on or after January 25, 2018, the only allowable Appendix Materials are:*

- Blank data collection forms, blank survey forms and blank questionnaire forms -- or screenshots thereof.
- Simple lists of interview questions.
- Blank informed consent/assent forms
  
- Other items *only if* they are specified in the FOA as allowable Appendix materials
- FOA-specified items

Full instructions pages K-98– K-99

### **Reference Letters** *(submitted via eRA Commons)*

Applicants for some career development programs (K01, K18, K22, K23, K25, K43, K76, K99/R00) must obtain reference letters in support of their application. Referees must submit these letters by the application deadline in order to be considered as part of the application. At least three, but no more than five, reference letters are required. The letters should be from individuals not directly involved in the application, but who are familiar with the applicant's qualifications, training and interests (the sponsor/co-sponsor(s) of the application cannot be counted toward the three required references). See also <http://grants.nih.gov/grants/how-to-apply-application-guide/submission-process/reference-letter.htm>

## **PHS Assignment Request Form**

The optional Assignment Request Form may be used to communicate specific application assignment and review requests to the Division of Receipt and Referral (DRR) and to Scientific Review Officers (SROs). This information was previously collected in the Cover Letter Attachment, but now this optional information must be provided on the Assignment Request Form and not in the Cover Letter Attachment. Full instructions pages K-139 and K-140

## **Citizenship**

The candidate must be a citizen or non-citizen national of the United States or its possessions and territories, or must have been lawfully admitted to the United States for permanent residence by the time of award except if any of the following apply: candidate is applying to the K99/R00 award program; candidate is applying to the K43 award program; or the FOA specifies otherwise. Full instructions pages K-98 & K-99

# PHS Human Subjects and clinical trials Information

There are three primary situations by which K applicants can apply for human subjects and/or clinical trial research.

1) Career Development Award (CDA) applicants who are not proposing a clinical trial: Follow the standard instructions to complete the PHS Human Subjects and Clinical Trials Information form.

2) CDA applicants who are proposing an independent clinical trial: Make sure you are applying to a FOA that allows independent clinical trials (this is noted in “Section II. Award Information” of the FOA). Follow the standard instructions to complete the PHS Human Subjects and Clinical Trials Information form. (Note that not every Study Record within your application has to be a clinical trial).

For more information on independent clinical trials, see:

- NIH Glossary definitions of [Independent Clinical Trial](#) and [Ancillary Study](#)
- [FAQ](#) on Ancillary Studies
- [FAQs](#) on the Human Subjects and Clinical Trials Information form, including a specific [FAQ](#) on K99/R00 applications.
- FAQs on Clinical Trial-specific FOAs, including a specific FAQ on K99/R00 applications.

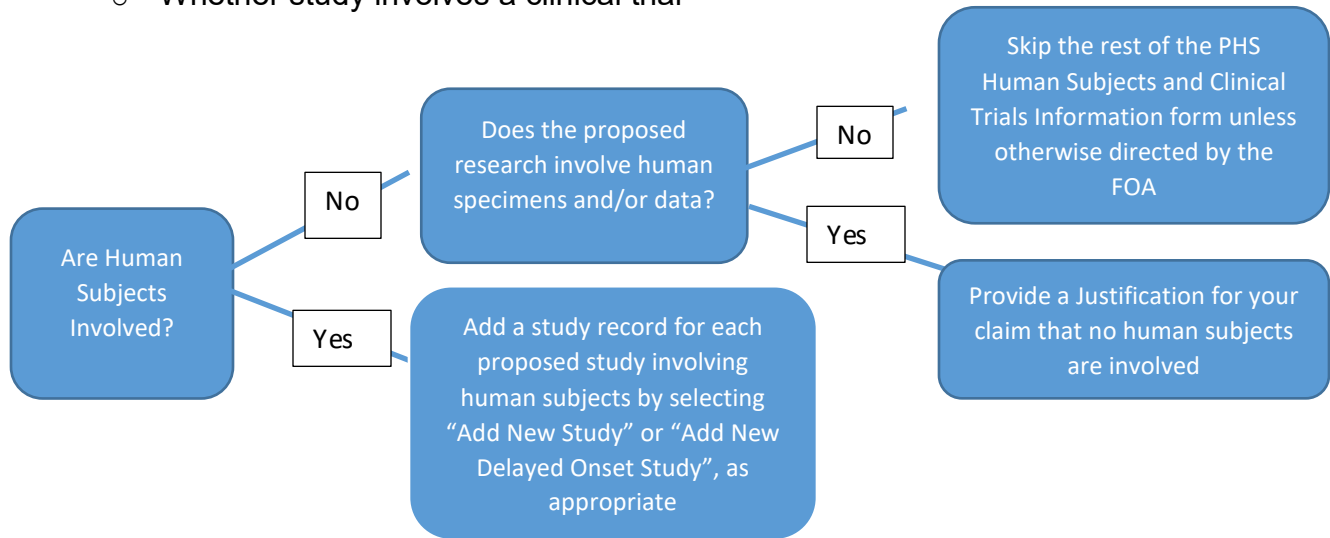
3) CDA applicants who are proposing to gain clinical trial research experience under a mentor’s supervision (i.e., you will not be leading an independent clinical trial): You will generally follow the standard instructions to complete the PHS Human Subjects and Clinical Trials Information form, but follow relevant Career Development instructions where they are given. Make sure you are applying to a FOA that allows Clinical Trial Research Experience (this is noted in “Section II. Award Information” of the FOA). Additionally, the mentor or co-mentor is required to include a statement to document leadership of the clinical trial. The statement must include the following:

- Source of funding
- ClinicalTrials.gov identifier (e.g., NCT87654321), if applicable;
- A description of how your expertise is appropriate to guide the applicant in any proposed clinical trials research experience; and
- A statement/attestation that the mentor will be responsible for the clinical trial.
  - The mentor must have primary responsibility for leading and overseeing the trial and must describe how she/he will provide this oversight (be careful not to overstate the candidate’s responsibilities).



## Human Subjects and Clinical Trial Information see Human Subjects checklist [here](#)

- New Form included in all Applications (whether or not human subjects or clinical trials are involved)
- Required form fields vary based on a number of factors, including:
  - if proposed research does not involve human subjects BUT involves use of Human Specimens or Data (see here for Research Involving Private Information or Biological Specimens flowchart)
  - Whether study is Delayed Onset , defined as human subjects research is anticipated within the period of award but definite plans cannot be described in the application. ○
  - Announcement specific instructions
  - Human Subjects Exemptions
  - Whether study involves a clinical trial



# **NIH Career Development Checklist – Forms E**

- Cover Letter (*required for Mentored Career Development, generally 1 – 2 pages*)
- Project Summary/Abstract (*30 lines of text maximum*)
- Project Narrative (*2 or 3 sentences maximum*)
- Bibliography & References Cited
- Facilities & Other Resources
- Equipment
- Biographical Sketches – applicant and mentor/co-mentor(s) (*5 page limit*)
- Current and Pending Support (*mentor/co-mentor(s) only, 3 page limit for each*)
- Budget Justification
- Introduction to Application (*for resubmission only, 1 page limit*)
- Candidate Information and Goals for Career Development
- Specific Aims (*1 page limit*)
- Research Strategy (*12 page limit for both Research Strategy and Candidate Information and Goals for Career Development combined*)
- Progress Report Publication List (*renewal applications only – not applicable for career awards*)
- Training in Responsible Conduct of Research (*1 page limit*)
- Plans and Statements of Mentor and Co-Mentor(s) (*6 page limit*)
- Letters of Support from Collaborators, Contributors, and Consultants (*6 page limit*)
- Description of Institutional Environment (*1 page limit*)
- Institutional Commitment to Candidate's Research Career Development (*1 page limit*)
- Protection of Human Subjects (*if human subjects involved*)
- Data Safety Monitoring Plan (*if clinical trial*)
- Inclusion of Women and Minorities (*if human subjects involved*)
- Inclusion of Children (*if human subjects involved*)
- Vertebrate Animals (*if vertebrate animals used*)
- Select Agent Research (*if application involves the use of select agents*)
- Resource Sharing Plan
- Authentication of Key Biological and/or Chemical Resources (*1 page limit*)
- Appendix
- Inclusion Enrollment Report
- Assignment Request Form
- Reference Letters (submitted via eRA Commons)

## **Appendix A – NIH General Biographical Sketch Reference Sheet**

### **NIH General Biographical Sketch Reference Sheet**

The biographical sketch may not exceed five pages and follows the format below:

#### **A. Personal Statement**

- Briefly describe why you are well-suited for your role in the project described in this application
- Identify up to four peer-reviewed publications that specifically highlight your experience and qualifications for this project
- May explain impediments to your past productivity and include a description of factors such as family care responsibilities, illness, disability, and active military service

#### **B. Positions and Honors**

- List in chronological order previous positions, concluding with the present position. List any honors. Include present membership on any Federal Government public advisory committee.

#### **C. Contribution to Science**

- Briefly describe up to five of your most significant contributions to science
- For each contribution, reference up to four-peer reviewed publications or other non-publication research products (can include audio or video products; patents; data and research materials; databases; educational aids or curricula; instruments or equipment; models; protocols; and software or netware) *\*note: applicants may use 'et al' in lieu of listing all authors in a citation*
- The description of each contribution should be no longer than one half page including figures and citations
- May provide a URL to a full list of published work – this URL must be to a Federal Government website (a .gov suffix). NIH recommends using My Bibliography. Providing a URL to a list of published work is not required, and reviewers are not required to look at the list.

#### **D. Research Support**

- List both selected ongoing and completed research projects for the past three years (Federal or non-Federally supported)
- Begin with the projects that are most relevant to the research proposed in the application
- Do not include number of person months or direct costs

## Appendix B – Budget Justification Best Practices

### Budget Justification Best Practices

A budget justification is a narrative explanation of each of the components of the budget, which “justifies” the cost in terms of the proposed work. The explanations should focus on how each budget item is required to achieve the aims of the project and how the estimated costs in the budget were calculated. The budget justification should:

- Follow funding agency guidelines.
- Explain why each of the requested items is necessary to accomplish the proposed research.
- Be organized in the order of the detailed budget page.
- Make it clear that all budget requests are reasonable and consistent with sponsor and Brown University policies.

*The funding agency guidelines may list different categories or criteria allowable in a budget, so the following should be seen as a general template. Below are the main categories of most budgets, with an explanation of that category followed by a sample entry.*

#### **SENIOR PERSONNEL**

This category includes anyone who is a PI, Co-PI or Project Director. List the name, title, amount of time to be spent on the project (in calendar, academic and/or summer months) and what s/he will accomplish. *Note: Committing effort to a project without also charging the salary for that effort to the project budget is considered cost sharing. Brown University provides only the minimum amount of cost sharing necessary to meet sponsors’ requirements and discourages voluntary committed cost sharing. The full Cost Sharing on Sponsored Projects policy can be accessed [here](#).*

*Example:*

John Smith, Ph.D., Principal Investigator (2 academic months and 1 summer month). Dr. Smith is a Professor of Biology at Brown University. Dr. Smith will be responsible for the overall coordination and supervision of all aspects of the study. This includes hiring, training, and supervising staff/students; recruiting study participants; coordinating treatment and assessment components; scheduling and staff assignments; and data management. In addition, he will conduct the orientation sessions, assist with statistical analyses, and be responsible for reporting the study’s findings.

Jane Doe, Ph.D., Co-Investigator (2 calendar months). Dr. Doe is an Associate Professor of Psychiatry and Human Behavior (Research) at Brown University. Dr. Doe will be responsible for the collection and analyses of the fecal materials. She will also assist in manuscript preparation.

#### **OTHER PERSONNEL**

Common personnel types budgeted include Postdoctoral Associates, Graduate Student Research Assistants, Undergraduate Research Assistants and Research Technicians. When known, list the name, title, amount of time to be spent on the project (in calendar, academic and/or summer months) and what s/he will accomplish.

*Example:*

Michael Johnson, Ph.D., Post Doctoral Associate (12 calendar months). Dr. Johnson will coordinate the day-to-day management of the study, assist in assessments, be responsible for

## **Appendix B – Budget Justification Best Practices**

data entry of all treatment-related data (i.e., scheduling and conducting weights, attendance, self-monitoring), and serve as an interventionist.

TBN Project Coordinator (6 Calendar Months). This individual will assist with recruitment, assessments, and serve as an interventionist. Additionally this person will aid with preliminary data analyses and manuscript preparation.

TBN Research Assistant (12 Calendar Months). This individual will assist with recruitment, ordering supplies and intervention materials, assessments, collection of dietary data, daily management of study data, and scoring and data entry of assessments.

### **OTHER SIGNIFICANT CONTRIBUTORS**

Other significant contributors (OSC) are individuals who have committed to contribute to the scientific development or execution of the project, but are not committing any specified measurable effort (i.e., person months) to the project. If no salary is being requested, do not quantify the amount of time and effort that will be spent as this would constitute an effort commitment and therefore be considered cost sharing.

### **CONSULTANTS**

Provide the consultants name, institution and an explanation of the area of expertise the consultant will provide to the project. If a consulting fee is to be paid, explain how it was calculated (i.e., \$X/day x # of days). The rate may be calculated on an hourly or daily basis, or may be based on completion of a task or milestone. Obtain a letter from each consultant indicating his/her willingness to act as a consultant to the project.

### **FRINGE BENEFITS**

Fringe benefits can change yearly, and should be confirmed before submitting your budget. Current Brown University fringe benefit rates can be accessed [here](#).

### **EQUIPMENT**

Equipment is defined as a single item that has a useful life of more than one year and a unit cost of at least \$5,000. However, if an item consists of parts that are only functional when assembled, that is considered one item. Specify the type of equipment, and if known, the model and vendor name. Explain how this equipment will be used in the project and why it is necessary to purchase equipment dedicated to this project rather than use shared resources. If possible, provide a vendor quote. If a quote is not available, indicate how the amount budgeted was determined (i.e., website price list, prices from University purchasing contracts, etc.). Equipment is excluded from Facilities and Administrative Cost Base.

#### *Example:*

Funds are requested to purchase three Biologs (\$7,150 each). These are ambulatory physiological data recorders with multiple channels that will be used to record mothers' heart rate (RSA), activity level, and electrodermal activity (e.g., skin conductance). Recorded data is compactly stored on a removable memory card. When recording is complete, the card is inserted into a card reader which is connected to a PC through a serial port. Three Biologs are needed because there are several periods when assessment points overlap ( e.g., parental interviews, 6 months laboratory visits, 6 months home visits), and dedicated equipment for each type of visit will ease scheduling demands.

## **Appendix B – Budget Justification Best Practices**

### **TRAVEL**

When possible, list “who, what, when, where and why.” Organize travel costs separately for domestic vs. international travel. Explain how the costs were estimated (i.e., \$X roundtrip airfare + \$Y lodging for # of nights, + \$Z per diem for # of days). Airfare must be coach class and, if paid by a federal grant, booked on a US carrier whenever possible.

*Example:*

Domestic Travel - \$Amount Support is requested for Dr. PI and Dr. Co-PI to attend the American Society for Cell Biology Association conference in year 3 to share results. This estimate is based on \$500 airfare per person, \$185 hotel per night per person for four nights, and standard per diem rates used by Brown University.

Foreign Travel - \$Amount support is requested for Dr. PI to travel to Costa Rica to collect data from La Selva Biological Station. This estimate is based on \$1,500 airfare, \$110 hotel per night for 20 nights, and standard per diem rates used by Brown University.

### **PARTICIPANT/TRAINEE SUPPORT COSTS**

Participant support costs are direct costs for items such as stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with meetings, conferences, symposia or training projects.

NSF REU costs are budgeted in this category.

Unless stated in the FOA this section should be left blank for NIH research grant applications.

### **OTHER DIRECT COSTS**

Other direct costs can only be charged to a grant if they can be readily and specifically identified with that particular project and comply with the funding agency’s program guidelines. Costs that are essential to the project’s research and which will be used solely for the project may be budgeted with proper justification. Always explain why purchases are essential to the project’s aims and dedicated only to research on this project, and explain how the costs were calculated. Though different grant mechanisms allow or disallow various other direct costs, typical allowable other direct costs include the following:

- Materials and supplies – An estimated supply budget of ~12K-15K/year for each FTE may be reasonable. This amount will vary depending on the nature of the research proposed. Animal intensive studies and studies involving human subjects tend to be more costly.
- Publication costs
- Animal purchase and care costs
- Equipment maintenance expenses
- Fees-for-service, such as commercial lab tests
- Graduate Research Assistant Tuition and Fee

Costs that are normally considered facility & administrative (indirect) costs include: office supplies, personal computers, books and subscriptions, memberships, local phones and cell phones, postage and FedEx, parking, printing and photocopying. However, if any of these costs are essential to the project’s research, are allocable and will be used solely for the project, then they may be budgeted when listed in the budget with proper justification

## **Appendix B – Budget Justification Best Practices**

### *Examples:*

Materials and Supplies – Laboratory supplies including chemicals, glassware and disposables are required for processing the samples collected. Total cost for supplies each year is estimated at \$1,500.

Publications – We request funds to cover the costs associated with publication charges. We anticipate publishing 2 papers per year, at an average cost of \$1,000 each. This expense will be \$2,000 per year.

### **SUBRECIPIENT (CONSORTIUM) COSTS**

A subaward or subcontract (sometimes called a consortium agreement) is required when a third party (the subrecipient) will be responsible for execution of a portion of the project work. When the Brown University budget includes funding for subrecipient(s), the Brown budget justification should state the name(s) of the subrecipient organization(s) and include a brief justification for subcontracting to each entity by explaining the project goals involved in their work. The specific items in the subrecipient budget(s) should not be explained here. The budget and budget justification from each subrecipient should be included in the proposal, separately from Brown's budget and justification.

### *Example:*

MIT will carry out the IPB test and ProtoExist2 ASIC design and is expected to need \$35,000 each year. Please see MIT budget and justification for details.

UCSD will design and build the Gondola pointing system, starting in year two and is expected to need \$20,000 per year. Please see UCSD budget and justification for details.

### **FACILITIES AND ADMINISTRATIVE COSTS**

The budget justification should include a statement about the F&A cost rate (also referred to as indirect costs or overhead) that has been applied to the budget. For proposals to federal agencies, state that the F&A costs included in the budget are based on Brown University's negotiated F&A cost rate agreement, and provide the effective date of the agreement. For corporate or non-profit organizations, it is likely that the sponsor will specify the indirect cost rate that is allowed.

### Sources

*Harvard University*

*University of Maryland*

*Montana State University*

*Saint Mary's College*