

NIH R21 Cheat Sheet

Applicants should use the MOST RECENT funding announcement. Please check the “Release/Posted Date” in the “Key Dates” section of the RFA/PA to ensure that it is up to date (August 12, 2011).

1. Link to NIH Exploratory Developmental Research Grant Program (Parent R21):

<http://grants.nih.gov/grants/guide/pa-files/PA-11-261.html>.

2. Check the actual funding announcement to which you are responding to see if standard due dates apply (sometimes dates vary).

3. **R21 Standard Due Dates:**

Cycle 1: February 16 (AIDS/ AIDS Related: May 7)

Cycle 2: June 16 (AIDS/ AIDS Related: September 7)

Cycle 3: October 16 (AIDS/ AIDS Related: January 7)

4. **Other Important Dates:**

Scientific Merit Review Dates:

Cycle 1: June - July

Cycle 2: October - November

Cycle 3: February – March

Advisory Council Review Dates:

Cycle 1: September - October

Cycle 2: January - February

Cycle 3: May – June

Earliest Project Start Date:

Cycle 1: December

Cycle 2: April

Cycle 3: July

5. Check your announcement to see if single or multiple Principal Investigators (PIs) are allowed. For applications designating multiple PDs/PIs, a **Multiple PD/PI Leadership Plan** must be included. (See the announcement for the link, contact the office for sample plans).

6. **Purpose:** The NIH R21 funding opportunity supports the development of new research activities in categorical program areas. The R21 mechanism is intended to encourage exploratory and developmental research projects by providing support for the early and conceptual stages of these projects. R21 research may lead to a breakthrough, or the development of novel techniques, agents, methodologies, models, or applications- that could have a major impact.

7. **Renewals:** Not applicable.

8. Budget Information: R21s use the module budget (in \$25,000 modules). The total project period may not exceed two years. Direct costs: limited to \$275,000 over two-year period. No more than \$200,000 in direct costs are allowed in any single year.

9. Title: Limited to **81 characters** (includes spaces and punctuation marks).

10. Project Summary (Abstract):

- No longer than **30 lines of text**.
- Summary of the proposed activity suitable for dissemination to the public.
- Briefly state the specific aims and research design.
- Provide info on the significance (i.e., the gap the study is addressing and the public health significance).

11. Project Narrative:

- No more than **2 or 3 sentences**.
- Describe the **relevance to public health**.
- Be succinct, use plain language appropriate for a lay audience.

12. Biographical Sketch:

- Each biosketch is limited to **4 pages**.
- **Educational Block:** begin with baccalaureate information.
- **“Personal Statement”** Briefly describe why your experience and qualifications make you particularly **well-suited for your role** on this project.
- Include **no more than 15 publications** or manuscripts in press (NOT submitted or in preparation).
- If you are citing NIH funded studies in your articles on your biosketch that fall under Public Access Policy (<http://publicaccess.nih.gov/>), provide the NIH Manuscript Submission reference number (e.g., NIHMS97531) or Pubmed Central reference number or **PMCID** (e.g., PMCID234567). More information can be found here: http://www.nlm.nih.gov/pubs/techbull/so08/so08_skill_kit_pmcid.html.
- The NIH Public Access Policy: applies to all peer-reviewed articles accepted for publication on or after April 7, 2008 and onward. See <http://publicaccess.nih.gov/> for more details.
- If the PMCID is not yet available because it is in process, then state “PMC Journal – In Process.” A list of the journals can be found here: http://publicaccess.nih.gov/submit_process_journals.htm.
- **Research Support:** List selected ongoing and completed (*during the last three years*) research projects (Federal or non-Federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and key personnel responsibilities that are relevant to the current application. *Do not include number of person months or total costs.*

13. Specific Aims:

- **1 page limit.** The Specific Aims do NOT count toward your Research Strategy, which has a 6 page limit.
- **Concisely** state the goals of the proposed research.
- Summarize the expected outcomes, including **impact** of research on fields involved
- **Succinctly** list objectives of proposed research (e.g., to test a hypothesis, create a novel design, solve a specific problem, etc.).

14. Research Strategy:

- Cannot exceed **6 pages** (for R21s; page limits for other grant types will vary. Please see the NIH Table of page limits for other grant mechanisms: http://enhancing-peer-review.nih.gov/page_limits.html).

- This section includes the following headings: **Significance, Innovation, Approach.**

A. Significance:

- 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 changed** if the proposed aims are achieved.

B. Innovation:

- Explain how the application **challenges** and seeks to **shift** current research or clinical practice paradigms.
- Describe any **novel** theoretical concepts, approaches or methodologies, instrumentation or intervention(s) to be developed or used, and any **advantage over existing** methodologies, instrumentation or intervention(s).
- Explain any **refinements, improvements, or new applications** of theoretical concepts, approaches or methodologies, instrumentation or interventions.

C. Approach:

- If you are including **Preliminary Studies**, put this information in the “Approach” Section.
- Describe the **overall strategy, methodology, and analyses** to be used to accomplish the specific aims of the project. 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 precautions to be exercised (<http://www.ehs.columbia.edu/>).

15. Other Sections:

- Cover Letter: NIH suggests that you **request a specific Institute/Center** and a **specific review committee**. Check with the project officer listed on the RFA for advice on this.
- Facilities and other Resources: PIs must identify facilities used, their capacities, pertinent capabilities, relative proximity and extent of availability to the project. Describe how the scientific environment in which the research will be conducted contributes to the probability of success. For Early Stage Investigators, describe **institutional investment** in the success of the investigator. The R² office has prepared a template that PIs may tailor for their proposals. Please contact the office to see this boilerplate document.
- Bibliography/References Cited- this section does **not** count toward your page limit.
- Inclusion Enrollment Report
- Human Subjects Sections:
 - Protection of Human Subjects
 - Inclusion of Women and Minorities
 - Inclusion of Children
 - Targeted/Planned Enrollment Table
- Vertebrate Animals
- Select Agent Research. A full discussion on the use of Select Agents should appear in this section. PIs must now describe the biocontainment resources available at all performance sites.
- Multiple PD/PI Leadership Plan (if applicable)
- Consortium/Contractual Arrangements (if applicable)
- Letters of Support
- Resource Sharing Plan(s)

16. Miscellaneous Information about R21 grant applications:

- Review panels are advised to evaluate the *conceptual framework* and *general approach* of the R21. They are looking for discrete, well-defined projects that can be realistically accomplished in the two years with limited funding.

Note: Note: The R² Office has instructions and template documents for each section of these proposals. Please contact Dr. Pam Factor-Litvak, Associate Dean for Research Resource (R²) at prf1@columbia.edu for support while preparing an NIH R21 application.