

REVIEWER GUIDELINES FOR R24 APPLICATIONS

The guidelines available here use language posted in the original funding opportunity announcement (FOA) and do not replace or modify the criteria established in the full announcement. If you have any questions, contact the Scientific Review Officer (SRO) in charge of the review panel. SRO contact information for your application can be found in [eRA Commons](#).

The complexity of biomedical science often requires the input and expertise of multiple collaborating investigators working as an investigative team. Currently, support for collaborative research may take the form of a large R01 with a Program Director/Principal Investigator (PD/PI) and one or more key personnel and/or collaborators; a multi-PD/PI R01 where credit and responsibility for a project are shared; a Program Project grant (P01) with 3 or more individual and independent projects, with cores, centered on a common theme; or a Center supporting a focused set of resource-related activities. While the R01, P01 and Centers mechanisms can foster certain kinds of collaborations, their structures cannot always readily accommodate interdisciplinary team science that synergizes around a single, critically important research challenge; for example, an unanswered, critical question or construction of a unique resource.

In recognition of the need to provide a flexible mechanism to support interdisciplinary team science, the current initiative will support a Collaborative Interdisciplinary Research Program designed to provide flexible support for research teams focused on innovative approaches to a single research challenge relevant to understanding biology that falls within the research mission of the NIDDK. This includes, for example, research related to diabetes, endocrine and metabolic diseases, digestive diseases and nutrition, and kidney, urologic and hematologic diseases and the development of new approaches to prevent, treat and cure these diseases. Collaborative interdisciplinary teams could support basic, or integrated basic and clinical studies that have a potential to move forward the NIH agenda on translation.

The Collaborative Interdisciplinary Research program is designed to support: (a) A team of independent investigators with complementary expertise that will develop a synergistic approach to investigate a single, critically important research challenge; (b) Research projects of high scientific quality supported by strong preliminary data; and that might include the development or use of unique resources.

This R24 is **not** intended to support more traditional investigator-initiated and highly focused studies best supported through the R01 or P01 mechanisms. Nor is it intended to provide core type infrastructure for the R24 application or for already existing and funded projects.

Other submission requirements

Applicants should include a plan for the collaborative team science approach under the Research Strategy Section of the application, including plans for enhancing communication between and among members of the team. *For purposes of evaluating the suitability of the R24 and the strengths of the collaborative team science approach to the central problem, the following criteria will apply in addition to those defined in the enhanced peer review criteria:*

- 1) Does the team that has been assembled have the appropriate mix of expertise necessary to achieve the objectives of the work proposed? [*address within investigators*]
- 2) Does the team apply appropriate and state-of-the-art approaches to the problem in such a way as to create a level of synergy that will significantly enhance the outcome? [*address within approach*]
- 3) Has an administrative organization been delineated, including plans for a) the coordination of ongoing research, b) the establishment and maintenance of internal communication and cooperation among investigators, c) the prioritization of usage of shared resources? [*address within environment*]
- 4) Are the proposed budgets appropriate for the work to be done? Is there an appropriate institutional commitment to the program, including lines of accountability regarding management of the R24 grant? [*address within budget*]

The following must be addressed in the Research Plan: A clear plan of operation should be provided for the administrative structure and proposed interactions among the investigators. Research related to any resources that are needed to enhance the capabilities of the team should be clearly articulated. The coordinated use of shared resources that could increase the efficiency of the entire team, as well as facilitate the use of new technologies and the pursuit of new lines of investigation should be defined. The plan for development and use of resources should help to promote the interdisciplinary and collaborative research around which the team has formed. Shared research resources and activities can include services (e.g., cell isolations, patient recruitment, statistical or bioinformatics support); equipment (e.g., confocal microscope, scanning electron microscope); or other types of key facilities, cores, or reagents (e.g., use of transgenic facilities, access to batch preparation of reagents, clinical research resources), as needed by the collaborative team. Since the overall goal of the R24 is to bring together investigators from varied disciplines to attack a single research challenge in a coherent fashion, the justification for drawing investigators from varied disciplines (e.g., chemistry, physics, biological computation, imaging, molecular biology, physiology, etc) should be well defined. The role(s) for each member of the team and how the team will provide the requisite synergies for answering the complex problem should be clearly articulated. These activities should significantly enhance the investigators' existing capabilities and introduce new approaches to the research aims of the objective of the collaborative team. The collaborative research plan must facilitate a synthesis of information that would not be possible otherwise. [*address within approach*]

Scored Review Criteria - Overall

Reviewers will consider each of the review criteria below in the determination of scientific merit, and give a separate score for each. An application does not need to be strong in all categories to be judged likely to have major scientific impact. For example, a project that by its nature is not innovative may be essential to advance a field.

Significance

Does the project address an important problem or a critical barrier to progress in the field? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field? Does the application address a significant research topic that fills a gap in the current knowledge?

Investigator(s)

The R24 is a flexible "R" type grant mechanism that can be used to encourage a multi-disciplinary, team based approach to complex challenges in biomedical science in ways that are not often the case with the traditional R01. The PD/PI will submit the R24 from his/her institution (hereby termed applicant institution). Other members of the team may serve as co-investigators; or as a group of multiple-PDs/PIs. For institutions/organizations proposing multiple PDs/PIs, visit the Multiple Program Director/Principal Investigator Policy and submission details in the Senior/Key Person Profile (Expanded) Component of the PHS398 Application Guide. Funding to PDs/PIs at institutions other than the applicant institution will be administered according to the guidelines of a consortium. The Program Director/Principal Investigator of an R24 grant may be located at one institution while other members of the collaborative team may be located at the same, affiliated, or other institutions. Members of the team need not have interacted previously on this, or other problems.

Are the PD/PIs, collaborators, and other researchers well suited to the project? If Early Stage Investigators or New Investigators, or in the early stages of independent careers, do they have appropriate experience and training? If established, have they demonstrated an ongoing record of accomplishments that have advanced their field(s)? If the project is collaborative or multi-PD/PI, do the investigators have complementary and integrated expertise; are their leadership approach, governance and organizational structure appropriate for the project? Is the proposed research topic best addressed by an interdisciplinary approach as presented by this particular team? Do team members have other research support as well as a publication record that supports their particular expertise and field of research? Team Science: Does the team that has been assembled have the appropriate mix of expertise necessary to achieve the objectives of the work proposed?

Innovation

Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed? Is the planned research substantially different from that already being pursued in the laboratories of team members or elsewhere?

Approach

Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented? If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed?

If the project involves clinical research, are the plans for 1) protection of human subjects from research risks, and 2) inclusion of minorities and members of both sexes/genders, as well as the inclusion of children, justified in terms of the scientific goals and research strategy proposed? Are paradigm-shifting approaches and/or technologies being used to address the problem? Are the unique strengths of each team member being appropriately used to address the question? Synergy: Does the team apply appropriate and state-of-the-art approaches to the problem in such a way as to create a level of synergy that will significantly enhance the outcomes?

Environment

Will the scientific environment in which the work will be done contribute to the probability of success? Are the institutional support, equipment and other physical resources available to the investigators adequate for the project proposed? Will the project benefit from unique features of the scientific environment, subject populations, or collaborative arrangements? Has a plan been developed to facilitate the interaction of PD/PIs and key personnel at different institutions? Will data and resources be easily shared in order to address the application in an integrated, interdisciplinary way? Administration organization: Does the administrative organization reflect a coordination of ongoing research and establish and maintain internal communication and cooperation among investigators? Are mechanisms to prioritize the usage of shared resources provided?

Additional Review Criteria - Overall

As applicable for the project proposed, reviewers will evaluate the following additional items while determining scientific and technical merit, and in providing an overall impact/priority score, but will not give separate scores for these items. For further detail, see PAR.

- Protections for Human Subjects
- Inclusion of Women, Minorities, and Children
- Vertebrate Animals.
- Biohazards
- Resubmissions
- Renewals
- Revisions - Not Applicable

Additional Review Considerations - Overall

As applicable for the project proposed, reviewers will consider each of the following items, but will not give scores for these items, and should not consider them in providing an overall impact/priority score. For further detail, see PAR.

- Applications from Foreign Organizations
- Select Agent Research
- Resource Sharing Plans
- Budget and Period of Support