**P41 GUIDE FOR REVIEWERS**

*NIGMS P41 Biomedical Technology Research Resource (BTRR) Grant Applications*

**Purpose of the Award**

* The National Institute of General Medical Sciences (NIGMS) uses the P41 mechanism to support Biomedical Technology Research Resources (BTRRs) in a variety of areas of biomedical science. BTRR research teams create critical, often unique, technologies at the forefront of their respective fields. The Resources are structured to foster collaborations with biomedical researchers to apply the technologies to a broad range of basic, translational, and clinical research. Resources also promote the broadest possible use of those technologies through training and dissemination activities. Details concerning current BTRRs can be found at [http://www.nigms.nih.gov/About/Overview/BBCB/BiomedicalTechnology/BiomedicalTechnologyResearchResources.htm](http://www.nigms.nih.gov/About/Overview/BBCB/BiomedicalTechnology/BiomedicalTechnologyResearchCenters.htm).
  + - The National Institute of Biomedical Imaging and Bioengineering (NIBIB) has a similar program that supports Biomedical Technology Resource Resources. Details about that program can be found at [http://www.nibib.nih.gov/Research/ResourceResources](http://www.nibib.nih.gov/Research/ResourceCenters).
* BTRRs may be developed in a specific technological area. For example, a Resource might focus on instrumentation and methods development for a specific instrument type. In contrast, a Resource may integrate multiple technologies to create transformative approaches to a class of research problems. The research tools developed in a BTRR may include instruments and other specialized devices, software, reagents, and methods.
* These Resources create tools that can substantially improve present approaches to a wide variety of problems in the biomedical sciences. A successful BTRR will drive a virtuous cycle in which technological advances facilitate biomedical inquiry, leading to new questions which in turn motivate further technical innovation. This is accomplished through a synergistic interaction of technical and biomedical expertise, both within the Resources and through intensive collaborations with other leading laboratories. Ideally, these Resources identify opportunities for transformative technological advances that open new lines of biomedical inquiry. They also should be uniquely positioned to recognize biomedical research problems that are solvable by the creation of new tools. This intense synergy between technology development and community-driven biomedical problem-solving defines the Resources as fundamentally different in character from laboratories engaged in research projects that may have more narrowly defined goals.
* A BTRR is expected to serve as a resource for the biomedical research community and must have a national impact. Each Resource has three critical components that set it apart from other NIH research centers. A BTRR must provide (a) service and (b) training to outside investigators and must (c) disseminate the technology and methods it has developed. These efforts require the commitment of significant financial and personnel resources to activities outside of their primary research focus. Providing other investigators with ready access to Resource tools and expertise has a substantial impact on the administration and daily operation of the laboratory. Substantive, ongoing efforts to disseminate technologies and train non-specialists in their use require a fundamentally outward-looking philosophy, as well as enthusiasm for engaging the research community. The goal of these efforts is, so far as is possible, to export the technology and expertise of the Resource into the community, achieving a broader impact on biomedical research than would be possible through the projects in which the Resource can participate directly. Industrial partnerships are not required, but they are welcome when appropriate. Ultimately, the service, training, and dissemination components of the Resource should aim for the widespread and routine application of the technologies being actively disseminated.

**More Information**

* Consult the Funding Opportunity Announcement (FOA) to read the Review Process section; Individual FOAs often have additional review criteria and/or considerations

<http://grants.nih.gov/grants/guide/pa-files/PAR-14-021.html>

* A P41 application usually have Technology Research and Development projects, Driving Biomedical Projects, Collaboration and Service component, Training component, Dissemination component, Administration and Management component, and, sometimes Infrastructure component.
* Please see the following documents for more information on scoring and critique templates: <https://grants.nih.gov/grants/peer/guidelines_general/scoring_system_and_procedure.pdf> <http://grants.nih.gov/grants/peer/critiques/critique_template_instructions.pdf> .
* A comprehensive list of Guidelines for Reviewers is available at <http://grants.nih.gov/grants/peer/reviewer_guidelines.htm>