

Research Projects (30 pages) (This section can be structured in subsections Research Projects of Major Users and Research Projects of Minor Users or subsections Specific Research Topics. The limit is 4 pages per each Major User's project; however, three or fewer pages are strongly recommended. The Research Projects of Minor Users subsection is limited to 4 pages in total)

In this section, describe the benefit of the requested instrument to enhance Users' research projects. Research projects may be drawn from a broad array of topics in basic, translational, or clinical research; in particular, research projects on the advancements of technologies for the benefit of biomedical research may be included. Begin with the subsections "Research Projects of Major Users". All Major Users must have substantial need for the requested instrument. Detailed eligibility requirements for Major Users are described in Section III.3.

Since the funded research projects have been previously peer reviewed, describe their details only as necessary to explain how the requested instrument will advance the projects' research objectives. Do not simply copy the Specific Aims section from a funded application. Present sufficient technical details about types of samples or specific experimental protocols to be employed to allow evaluation of whether the instrument is appropriate, would be effectively utilized, and would provide advantages over other methods and other similar existing or new instruments. In particular, explain the need for special features and accessories of the requested instrument by describing the specific studies that will utilize these options, as at least three Major Users must need each of these special options. Similarly, if special software modules are requested, justify how they will advance the research projects of at least three Major Users. Preliminary data are not required, but if available, they may be used to illustrate the benefit of the requested instrument to the research projects. Describe how generated data will be handled and analyzed so that benefits of the entire experimental set-up can be evaluated. Summarize benefits that the requested instrument will provide towards answering specific scientific questions. Be succinct and clear.

If you choose to structure this Research Project section by including the Research Projects of Major Users subsections, limit the text to no more than 4 pages per each Major User's project. In the beginning of each Major User's Project narrative, list the PI's name and grant information (number, title, project start and end dates). Specify the anticipated usage in annual hours for each project.

If you choose to group Research Projects in subsections Specific Research Topics, list Major Users, their funded grants that you describe therein, and their cumulative usage as measured annual usage hours, in the beginning of each subsection.

In cases of certain technologies (such as computer systems or X-ray detectors), a large number of users, exceeding what is necessary to make a strong case for the need of the instrument, may be expected. Keep in mind that the sole number of users is not a compelling factor to justify scientific needs for the requested instrument.

If there are Minor Users and other users, include an up to 4-page long section entitled Minor Users' Projects. Describe the need of the requested instrument to advance projects from Minor Users and the user community at your institution (e.g., unfunded users who have significant need for the instrument to develop their research programs or users whose expected needs are at the level of 1% or less of the expected usage time). Include a sum of the anticipated usage in annual hours for all Minor/Other Users.

You should focus the Research Projects section on detailed explanation of how the requested instrument will advance research projects. Research projects may be drawn from a broad array of topics in basic, translational, or clinical research; in particular, research projects on the advancements of technologies for the benefit of biomedical research may be included.