

The Challenges of Obtaining Funding for Major Instrumentation

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There is a continuous need to upgrade major instrumentation in core facilities in order to offer researchers more advanced techniques and imaging options. However, obtaining funding for major instrumentation is a continuous challenge. We have had reasonable success in funding two major instruments within 3 years from two different agencies. But this was only after repeated attempts and perseverance.

Often it is difficult to make a case for a new instrument if there appears to be other similar or more advanced resources at your institution. The potential user base can be broad with many investigators having a long record of continuous funding but that is no guarantee of success. Neither is a basically sound proposal with no major defects but without glamour or well-known investigators. A few reasons for rejection of otherwise well-written and reviewed proposals that we have encountered are:

- 1) Reviewers suggesting that instruments already on campus should be “shared” rather than acquire a new one. However, this is often not possible, as, according to agency requirements, the instruments must be used for the projects that justified them before other investigators get access. When the sponsoring labs are large with major demands, available time may be very scarce. Thus, although they are “on campus”, the instruments are not available for use by other core service labs...especially if technicians need access during normal working hours.
- 2) Individual grants are very difficult to obtain but new instruments must be justified based on grants awarded to potential users. Funding may be denied if a significant number of those researchers have grants that are in their final years and success of newly submitted renewals is not yet known. New investigators who may not have an RO1 award often have strong need and justification but have little influence in an instrumentation proposal due to lack of agency funding.
- 3) A resubmitted proposal can adequately address the criticism from the earlier submission. However, a new panel may still reject the proposal based on comparison with newly submitted proposals competing for a limited pot of money.
- 4) Primary reviewer may not do a thorough job of reviewing a proposal, missing key elements in the review. This can result in vastly different recommendations from the primary and secondary reviewers and will often sink a proposal without further review.

Experience has shown that odds of receiving funding increase on resubmission if the reviewer comments can be addressed. It is also important to contact the program managers to discuss concerns over reviews or obtain clarification of reviewer comments. Reading proposals that have been funded can lead to better formatting and presentation so that your proposal makes a stronger impression on the panel. Most large instrumentation funding is through NIH or NSF, but these two agencies have very different objectives when awarding grants. It is critical that you understand the research philosophy of the particular program/agency and address this in writing your proposal.

Some projects proposed as justification for a new instrument are just not successful or are of relatively short duration. However, new researchers are constantly surfacing in a well-run service facility. If the institution has a large research base then there is strong reason to believe that the instrumentation will be well utilized over its lifetime.