



Enhancing discovery and saving money with MERIT

The National Institutes of Health and many of our biomedical institutions face significant budgetary challenges that are likely to persist for the foreseeable future. The paylines for Research Project Grant (RO1) applications to the NIH will be near or below the tenth percentile, and many investigators are growing increasingly concerned about maintaining their research programs. One of the most concerning potential results of limited grant dollars is the natural tendency for researchers to propose conservative projects that are more likely to succeed, to do well in peer review, and to be funded, but that may not dramatically advance the field, and a concurrent tendency among study sections to reward proposals that are seen as safe, if uninspiring. Established and well-respected investigators may be (perhaps appropriately) given the benefit of the doubt when compared with less-established colleagues and may therefore command a growing percentage of the total available grant dollars, while simultaneously avoiding bold and potentially groundbreaking approaches. At the same time, fewer dollars are available for new investigators with unproven track records and for the expansion of newly successful programs.

Method to Extend Research in Time (MERIT) awards (R37) were created by the NIH to recognize outstanding and consistently productive investigators and to provide up to ten years of research funding. The criteria for identifying MERIT awardees varies among institutes but generally allow an investigator who has renewed an RO1 grant one or more times and meets other criteria of excellence to convert the RO1 into an R37 and thus avoid the need for competitive renewal after 5 years.

Several NIH institutes are carefully reviewing the strengths and weaknesses of MERIT awards and other funding mechanisms in order to establish relative priorities in the setting of limited resources. Metrics and criteria used to identify MERIT awardees vary widely among institutes. Frequently, RO1 grants receiving the highest percentile rankings are given primary consideration, and at some institutes those with scores below the fifth percentile are excluded from consideration. Yet most study section members will concede that we cannot accurately or reliably discriminate among the fifth and the tenth (or even 15th) highest percentile applications. The result, many believe, is that some meritorious investigators are never considered for

MERIT awards and those who are chosen can represent a group with a wide range of accomplishments and potential.

NIH institute directors, administrators, and councillors should consider a new model to take better advantage of the R37 (MERIT) mechanism and to simultaneously save money and promote innovation from the very best investigators. Many of the most successful scientists submit and are awarded numerous grant proposals not only to fund growing research programs, but also in response to pressures from their home institutions to increase total funding and their own percentage of salary recovery. At the same time, opportunities for risk taking and innovation are hampered by frequent renewal deadlines, the need to manage multiple grants, and the tendency toward conservatism (real or perceived) among study sections. It is likely that many outstanding investigators who presently direct multiple funded research programs would willingly exchange their multiple grants for one MERIT award providing ten years of unfettered support. For example, a renowned investigator presently funded by three individual RO1 grants might be eager to trade all three for one ten-year award with an annual funding level equivalent to

two RO1s. Less money but more years of guaranteed funding would be a trade that many would accept, especially if funds for significant salary recovery (perhaps 80%) were included. Acceptance of a MERIT award would require relinquishing other NIH research project support and would preclude further RO1 applications that would overlap the funded time period of the MERIT award. The result would be an increased opportunity for risk taking, innovation, and discovery. Those who did not wish to make such a trade could decline the MERIT award. An informal polling of colleagues who presently manage three or four individual RO1 grants suggests that most would eagerly accept this type of MERIT award, thus providing incremental grant dollars to support other investigators and simultaneously removing a significant number of highly competitive applications from the study section pool.

Metrics for identification of potential awardees should be developed in consultation with institute councils and perhaps with the assistance of the Institute of Medicine and the National Academy of Sciences. Relevant criteria to measure impact and potential might include citations, transformational discoveries, and successful grant applications over an extended period. Contributions to the mission of the NIH (such as sitting on study section or council) might also be considered.

Difficult financial times will require new ideas to maximize our use of available resources. While MERIT awards account for only a small percentage of total NIH funding, the type of revised approach for utilizing the R37 mechanism described here would save money and free our best investigators to spend more time in the laboratory and less time preparing grant applications: a win-win for the biomedical enterprise and for the public.

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