

COMMENTARY

Recommendations for Reviewers of Biomedical Imaging Grant Applications

Mark D. Pagel 

University of Texas MD Anderson Cancer Center, 1881 East Road, 3SCR4.3642, Houston, TX, 77054, USA

Abstract

This commentary provides recommendations about how to interpret procedures and scoring criteria when reviewing grant applications and how to efficiently perform reviews. This guidance is especially designed for new grant reviewers and especially for reviewers of biomedical imaging grant applications. Recommendations are included about how to start the review process; how to review the Specific Aims page; how to consider Significance, Investigators, Innovation, Research Approach, and Environment; how to improve interactions at the review meeting; and other aspects of the review process. These recommendations are intended to improve the quality of the review process, which ultimately depends on the quality of the reviewers.

Key words: Grant review process, Reviewer training, Imaging grant applications

Introduction

Most organizations that fund research use a peer-review system to evaluate the scientific merit of a research project, which is then used to select grant applications that should receive funding [1]. For example, the Center for Scientific Review (CSR) organizes and directs the review of grant applications submitted to the National Institutes of Health (NIH) [2]. The CSR recruits approximately 16,000 researchers to review more than 70,000 NIH grant applications per year, resulting in the selection of ~15 % of these applications for funding [3, 4]. Most grant reviewers receive excellent technical instructions about the review procedures, including descriptions of review criteria and scoring processes [5]. More recently, the CSR has established an Early Career Reviewer program that provides training for new reviewers [6].

Unfortunately, little training is available about how to *interpret* review procedures and scoring criteria. These interpretations by grant reviewers are critical for a quality review process, similar to how a sports game depends on proper and consistent interpretations of the rules by the game officials. Past evidence has shown that grant reviewers often

establish their own interpretations, resulting in a consistent set of reviews by an individual reviewer [7]. However, individualized interpretations can often lead to inconsistent reviews between reviewers. This inter-reviewer inconsistency has frequently been identified as one of the primary problems of the peer-review process [7–11].

This commentary provides an interpretation of grant review guidelines and suggestions for efficiently performing reviews, especially for new grant reviewers. This commentary is focused on grant reviews for the CSR/NIH, although the following recommendations can also apply to other funding organizations that often use a similar peer-review system (despite proposed alternative methods for distributing research funds [12–15]). Finally, this commentary is focused on grant applications for biomedical imaging research, which often incorporates a multidisciplinary approach that combines engineering principles with scientific discovery and translation to clinical practice. Admittedly, these recommendations are an individual interpretation and may not agree with interpretations made by others [7]. In the case of disagreement, these recommendations can be used to stimulate further discussion within the biomedical imaging grant review community, potentially leading to more consistent interpretations of review procedures and scoring criteria.

How to Start

Start Early

Review one or two grant applications as soon as they are available and weeks before the deadline. This initial review can help new reviewers to gauge the workload. Waiting to review the applications just before the deadline can be stressful and potentially compromises the quality of the review.

Act Like Reviewer #1

Three primary reviewers are typically assigned to review each grant application before the review meeting. The CSR recognizes that each primary reviewer can have different areas of expertise. Occasionally, one reviewer with less expertise for the specific application is invited to be “Reviewer #3” or a “Discussant” who provides an abbreviated review. However, grant reviewers should commit to producing their best possible review of each grant application and should provide a full review instead of an abbreviated review, because the CSR and grant applicants depend on thorough, high-quality reviews to ensure that the best research is funded.

More generally, graciously declining a commitment or chance to collaborate does not harm a researcher’s reputation, but accepting a commitment or collaboration and not following through with the best effort can cause irreparable harm to a professional reputation. With this adage in mind, performing cursory reviews can harm a reviewer’s reputation among peer reviewers. One of the best ways that a reviewer can improve the chances of being invited to a subsequent review meeting is for the reviewer to produce the best review of each application.

Print the Specific Aims Page and the Main Research Strategy Pages

Also, print the “response to reviewers” page from a resubmitted grant application. These pages contain detailed, potentially dense information that can be useful to highlight with notes written on hardcopy. These hardcopies of the Specific Aims and Research Strategy, with annotated scores on the top page, can be helpful to have in hand during the review meeting. The remainder of the grant application can often be reviewed in electronic format. Therefore, only a small fraction of the entire grant needs to be printed, which saves a large amount of paper. Alternatively, some reviewers can work entirely with electronic computer files and without any hardcopy, which saves even more paper. In this case, electronic annotations on the Specific Aims page, Research/Strategy pages, and “response to reviewers” page can be most helpful when reviewing in electronic format.

Notably, the abstract and narrative are helpful when assigning grant applications to the primary reviewers with specific expertise; are good introductions when primary reviewers initially read the grant application; and can be helpful for other reviewers at the review meeting who are not the primary reviewers of the grant application. However, these documents have limited value for a primary reviewer after the reviewer has thoroughly read the Specific Aims and Research Strategy and prepares a detailed written critique. For this reason, printing or electronically annotating the abstract and narrative is less necessary.

Specific Aims Page

Find the Goal and Objectives

Many Specific Aims pages start with general background information. However, a reviewer should start by identifying the primary goal of the research and the justification for that goal (the scientific premise). Then, the reviewer can determine how the initial background information matches the premise. The reviewer should identify the objectives that are the strategic accomplishments to reach the goal (each specific aim can often be an objective). The reviewer should interpret whether the objectives meet the goal. The goal and objectives form the framework for a review.

Notably, tasks do not qualify as objectives. Tasks are technical processes that have little or no risk, and which must be performed to reach an objective. For example, writing computer code can be critical for accomplishing an objective, but the process of writing the code is a task with little or no risk because some type of code can almost always be written. For comparison, the output of the computer code has risk because the output may not match the needs of the project, which pertains to the objective and goal of the research.

Avoid Evaluating the Societal Relevance of the Disease or Subset of Patients

Many Specific Aims pages include general background information to justify the importance of the disease to be evaluated with a biomedical imaging method, which often includes a description of the size of the patient population. A grant application should certainly identify one or more specific biomedical applications to justify that the research will have an impact. However, determining the relevance of the disease to our society is a part of health care policy that can be a very complex topic. For example, if research should be correlated with the size of the patient population, then more NIH research should be focused on gingivitis that affects an estimated ~ 50 % of the US population, relative to research focused on cardiovascular disease or cancer that only affect ~33 % and ~25 % of the US population,

respectively. This example indicates that the societal relevance of health care is more complex than a brief description of the size of the patient population. In my opinion, scientific reviewers are not trained to be experts in health care policy and should focus on the science of the proposed research in a grant application.

Identify the Hypothesis or Quantitative Benchmarks

Interpreting whether a grant application should be evaluated based on a hypothesis or a quantitative benchmark is often the first step for framing an evaluation process. Many research studies have a hypothesis, which often have a true/false answer [16]. While hypotheses are very common for biological and biomedical research studies, “engineering” research that develops a device or process does not necessarily require a hypothesis. Instead, these engineering grant applications are often best evaluated with quantitative benchmarks. Such benchmarks are especially useful when reviewing biomedical imaging grants.

For example, a PI can hypothesize that a new imaging protocol will provide improved spatial resolution. The new protocol may indeed improve image resolution and thereby the hypothesis will be true. But if the spatial resolution is only incrementally improved relative to existing methods, then the new protocol will provide no significant impact. Instead, a PI should establish the quantitative improvement in spatial resolution that is needed to significantly impact biomedical diagnoses. For example, a PI can justify why the spatial resolution must reach a minimum quantitative level to resolve anatomical features that are necessary for diagnosis. If the new protocol achieves this quantitative benchmark in spatial resolution, then the research project can be considered to be successful.

Evaluate Stacked Aims

Many engineering grant applications propose a linear process of developing a device or protocol during initial aims and then testing this device or protocol in latter aims. These stacked aims, also known as dependent aims, can often be an easy weakness for a reviewer to identify. However, a reviewer should interpret the risk in the initial aims, especially with regard to the research team’s expertise. Also, a reviewer should consider preliminary results (for grant applications that require or allow for preliminary results), where the current device or protocol may be used in latter aims even if the device or protocol is not improved during initial aims. This thoughtful interpretation of the degree of stacked aims provides a higher quality review than just identifying stacked aims.

Significance

Consider Significance and Impact

As stated in [17]: “The mission of the NIH is to seek *fundamental knowledge* about the nature and behavior of living systems and the *application* of that knowledge to enhance health, lengthen life, and reduce illness and disability.” “Significance” can be interpreted as addressing both aspects of the NIH’s mission that are underlined above. “Impact” can be interpreted as only the *application* of the research for improving human health. My definition of “impact” differs from the NIH definition of “overall impact,” which pertains to the overall assessment of the grant application that considers the combination of Significance, Investigators, Innovation, Research Approach, and Environment [18].

Many biomedical imaging research projects focus on impact, which is often straightforward for reviewers to evaluate. For example, many imaging projects briefly describe that an improved imaging method will generally lead to improved human health, which is insufficient justification. Instead, the proposed research should describe specific biomedical applications (even if the application is beyond the scope of the immediate research project) and directly relate how the improved imaging method will specifically impact the biomedical applications.

Reviewers should not discount the importance of advancing fundamental knowledge of biological systems. In addition, reviewers should consider the advancements in the fundamental knowledge of physics, chemistry, and/or engineering to improve the technical capabilities of biomedical imaging. Therefore, reviewers should also evaluate the significance of fundamental knowledge that may be gained from proposed research studies.

Assume that All Specific Aims Will Be Successful When Evaluating Significance

Otherwise, a reviewer may risk conflating the evaluation of the Significance and Research Approach. For example, some grant applications propose a “moonshot” project that can have tremendous significance but seems impossible to accomplish. Positively reviewing the significance while negatively reviewing the research approach (which is unlikely to be accomplished) provides guidance to other reviewers and the PI about a reviewer’s interpretation of the grant application.

List Strengths and Weaknesses as “Major,” “Moderate,” or “Minor”

Reviewers should weight the importance of their comments, which aids in translating the comments to a numerical score and aids in reaching a consensus among reviewers. This recommendation applies to other review categories as well.

Investigators

Comment on the PI and Each Key Co-investigator in the Written Review

A reviewer can easily write one to two sentences about the PI and each key investigator after quickly reviewing the biosketches. Fellow reviewers and the PI will appreciate this extra effort to comment on the PI and each co-investigator in the written review, which demonstrates that the reviewer was thorough.

Avoid Penalizing New Investigators

Although there is no substitute for experience, experience should not be used as a criterion when evaluating investigators [19, 20]. Instead, reviewers should recognize that newer investigators may not be experienced grant authors, and therefore, applications from new PIs may have minor grantsmanship issues. In general, scientific reviewers should focus on the science and avoid harshly penalizing an application with regard to grantsmanship issues.

Recognize Potential Social Biases

Many analyses of grant review systems have indicated biases during grant reviews that relate to gender, age, or affiliation [20–22]. Notably, these biases can affect all categorical scores and not just the score for investigators. In addition, NIH grant award rates show differences based on race and ethnicity of the grant applicants [23]. Therefore, reviewers should take extra efforts to consider whether each categorical score and the overall score and whether terms used in the written critique would be different if an investigator had a different ethnicity, gender, age, or affiliation.

Evaluate Whether the Research Approach Truly Needs Specialized Expertise

For example, some biomedical imaging projects may be in an early stage prior to clinical translation or clinical practice, so the research team may not need clinical collaborators or consultants at that project stage. Similarly, some imaging projects require simple statistics analyses that do not require the advanced expertise of a biostatistician.

Rapidly Review Letters of Support

Many letters of support are generic and unhelpful. However, rapidly reviewing the letters of support can often help to gauge the expertise of a PI or key co-investigators.

Innovation

Consider that Not All Aspects of a Research Project Need to Be Innovative

Biomedical imaging research is often multidisciplinary. Using established approaches from some disciplines can provide a foundation for building new innovations in other disciplines. For example, developing a new imaging device or procedure may benefit from using a common cell type or small animal model to provide an established basis for evaluating the performance of the new device or procedure. Therefore, reviewers should interpret whether key innovations are truly innovative and allow other aspects of the approach to serve as an accepted foundation for the research.

Consider that Minor or Moderate Innovations Are Not Weaknesses

For example, applying an existing biomedical imaging device or protocol to study a different disease does not have as much innovation as developing a new imaging device or protocol. Yet, the new application can bring innovation to scientific research. As another example, new combinations of existing techniques can be considered to be innovative. As an analogy, the modern cell phone combines a telephone, email, maps, and other functions that previously existed as individual functions, which has revolutionized our society. For these reasons, interpreting new uses or new combinations of existing techniques as a weakness can send the wrong message to fellow reviewers and the PI. Instead, interpreting the innovation as a minor or moderate strength is often appropriate.

Consider Secondary Innovations

Reviewers often focus on the primary aspects of the research, such as the development of an imaging device or protocol. Yet, secondary aspects of the research may add to the innovation, such as studying a unique patient population with the imaging methodology. Innovations from co-investigators should also be considered.

Research Approach

Focus on Strategy

Technical details about research procedures are helpful for establishing the expertise of the investigators. However, past evidence has shown that reviewers place too much emphasis on details of the approach relative to other review criteria, which is especially problematic for reviewers who are particular experts in the specific research area of a grant application [19, 24]. Instead, the *strategy* of the research approach is more helpful than technical details when evaluating whether the research approach will truly address

the specific aims and objectives. For example, a narrow strategic approach can often fail to address a broadly claimed specific aim or objective. As another example, a strategic approach that includes multiple validation studies can greatly solidify an objective.

Carefully Consider Rigor

Studies with rigor are repeatable and reproducible (*i.e.*, have good precision), produce unbiased results (*i.e.*, have good accuracy) and have a strong consideration of relevant biological variables [25]. Multiple experiments are often needed to evaluate precision. Methods that validate biomedical imaging studies can be helpful when gauging the accuracy and relevant biological variables of a research project.

Carefully Evaluate Potential Pitfalls and Alternatives

A thoughtful, detailed analysis of pitfalls in a grant application can often show if the research is robust (insensitive to unintended variances in the experiment). Also, alternatives should be meaningful and not just cursory or “more of the same.”

Grant applications that state “we anticipate no pitfalls due to our expertise and experience” are unhelpful. All grant applications can make that type of statement. Reviewers must decide which grant applications are the most meritorious (relative to the ideal grant). Therefore, statements that can be made by any grant application fail to help reviewers with their decision process. Also, all research inherently has potential pitfalls (activities without risk should be considered to be a task rather than research). The inability or unwillingness to anticipate pitfalls could be considered to be a moderate or major weakness in the research approach.

Consider that Timelines Have Limited Value

A general review of a timeline can indicate that the scope of the research matches the time frame of the grant. Otherwise, a detailed analysis of a timeline has limited value when reviewing a grant application, because research activities are very difficult to accurately predict, especially beyond 2 years.

Environment

Identifying No Weaknesses Should Automatically Lead to the Best Score

The NIH and other funding organizations allow reviewers to provide a less-than-best score while also listing no weaknesses. However, this practice does not help fellow reviewers or the PI. Therefore, a reviewer should assign

the best score for a category if no weaknesses can be found, or should identify at least one minor weakness if a lower score is assigned. This issue is often encountered with the Environment category, but can occur with other scored categories as well [4, 24].

Focus on Relevant Facilities and Equipment

Unfortunately, many grant applications list many facilities and equipment throughout their institution, regardless of their importance to the specific research project. Therefore, Facilities and Equipment documents can often be rapidly skimmed to identify only the relevant resources.

At the Review Meeting

Most CSR/NIH grant review panels (known as study sections) that review biomedical imaging research consist of 25–30 scientists, although some study sections with special emphases can have fewer members. Many resources are available that describe these grant review meetings, including resources from CSR/NIH [3–5, 26]. To summarize the meeting process, most grant applications are reviewed by having the three primary reviewers (who thoroughly reviewed the application before the meeting) list their preliminary overall scores, summarize the research in the grant application, and summarize their critiques of the research. The first primary reviewer initially provides a longer summary that describes the proposed research to inform the other reviewers who did not read the entire grant application. Then, all reviewers are invited to discuss the grant application. Finally, the three primary reviewers announce their revised final scores, and all reviewers then assign their score to the grant application. Many study section meetings discuss ~50 grant applications during ~16 h of reviews performed for 2 days, necessitating that the average time for each grant review be less than 20 min. This constraint causes a fast-paced meeting, so that reviewers need to stay engaged and focused as much as possible throughout the review meeting.

The Primary Goal Is to Discuss a Grant Application in Ways that Can Change Initial Scores

Dwelling on details, minor strengths, or minor weaknesses, or discussing tangential research often does not affect the overall score and should be avoided.

As Reviewer #2 or #3, It Is Acceptable to Say “I have nothing more to add to the discussion”

Reviewers often feel obligated to prove their purpose by commenting on a grant application, even if the salient points

have already been described. After the first reviewer provides a thorough description of the strengths and weaknesses of the grant application, a second or third reviewer can show confidence in their understanding of the previous review by simply stating “I have nothing more to add.” Surprisingly, acknowledging that the previous descriptions were thorough, rather than reiterating the same information, can often garner appreciation by fellow reviewers during a fast-paced review meeting.

Other Reviewers Should Ask Questions that Evaluate the Critiques of the Primary Reviewers

After the primary reviewers present their reviews, other reviewers tend to join the discussion by providing their perspectives about the grant application. Yet, past studies have shown how discussions that evaluate the critiques made by the primary reviewers, rather than discussing the actual grant application, are more likely to result in changes in scores [11]. Therefore, other reviewers should ask questions that respectfully probe the critiques of the primary reviewers. For example, it is less helpful for the review process if another reviewer states “I would like to elaborate on the first reviewer’s point about how the choice of wavelength range has some advantages and disadvantages.” It is more helpful for the other reviewer to state “I share a similar perspective with the first reviewer about the wavelength range. I would like to ask the first reviewer for more clarification about how this issue has affected his score.” The latter example is more likely to lead to a change in scoring, either more positively or more negatively, and potentially lead to more consensus among the panel. Similarly, the three primary reviewers should review each other’s written critiques before the review meeting, so that the three primary reviewers are prepared to respectfully probe each other’s critiques during the fast-paced review meeting.

It Is Acceptable to Change a Final Score by More than One Increment

Reviewers can have a collegial debate about a grant application, which can be an interesting social experience [27]. After this debate, reviewers with disparate preliminary scores will often update their final scores by one increment, such as changing initial scores of “2” and “7” to final scores of “3” and “6.” This situation may possibly arise because a reviewer is concerned about losing credibility by adjusting his or her score by a greater amount. Yet, learning from a fellow reviewer during a review meeting shows great credibility as an insightful scientist. Therefore, changing a score by a greater amount is certainly acceptable and can often help the overall review process.

It Is Acceptable to Score Outside of the Range

Many review processes use the final scores of the primary reviewers to set the range of scores that the other reviewers can use for their final scoring. Yet, these review processes often allow a reviewer to score outside of the range set by the primary reviewers, if the reviewer states a reason for his or her score. Some reviewers may hesitate to score outside of the range, as if the reviewer is discounting the expertise of the primary reviewers, and especially at the start of a review meeting when reviewers are acclimatizing to the social dynamics of the review group. However, scoring outside of the range with an appropriate rationale improves the quality of the review process. Interestingly, a reviewer who is compelled to score outside the range, and announces this intent to score outside the range, is then often joined by some other reviewers, showing that the reviewer is often not alone in his or her perspective that may initially seem outside the norm.

Do Not Discuss Grant Applications Outside of the Grant Review Room

Grant reviewers are often in close proximity before and after the meeting and during breaks within the meeting. It is tempting to discuss grant applications in the interest of collegiality when outside the grant review room (or before or after the grant review meeting). However, the appearance of being less than absolutely confidential outside the grant review room is not worth potential consequences [28].

Prepare Detailed Critiques Before the Meeting and Add to the Critiques During the Meeting

Reviewers should provide a grant application with as much information as possible, so that the PI can improve the application for resubmission and potentially improve the research project. Detailed critiques can especially help the CSR and NIH when final funding decisions need to be made. A vague or sparsely written review severely damages the review processes because the substantial information gained from a review procedure is essentially wasted and not conveyed to personnel who make final funding decisions and to the grant author who plans to revise and resubmit an unfunded application.

Many reviewers elect to add information to their written critique after the review meeting, because the review meeting can have a fast pace. However, a reviewer should add information to the written critique soon after the grant application is discussed, when the information is memorable at the meeting. Also, when the review meeting has ended, it can be satisfying to reach closure and move on to other tasks, rather than having to revisit the review.

Subjective Recommendations

All of the recommendations listed above have some degree of subjectivity and yet are each based on a definitive justification. The recommendations listed below are also subjective and more of a matter of style than to support a justification. Yet, these subjective recommendations can still aid the review process.

Reach Consensus for the Best ~ 22 % of the Grant Applications

Approximately 22 % of grant applications deserve to be funded, because the quality of the best ~22 % of the applications is very difficult to differentiate. My estimate of ~22 % is partly based on experience as a grant reviewer and is partly substantiated by analyses that have shown no correlation between the overall scores of top applications and subsequent research productivity [3, 7, 29]. Unfortunately, funds are only available for ~15 % of the grant applications that are reviewed at a specific meeting. The most obvious way to address this discrepancy is to increase funding for scientific research by ~50 %. Until this occurs, the next best solution is to ensure that the primary reviewers, and all reviewers at the meeting, reach close consensus about the best ~22 % of the grant applications that may be potentially funded. Fortunately, past studies have shown that a strong consensus is often reached among primary reviewers at the review meeting [11]. Yet, a greater emphasis on reaching a consensus is critically needed, especially because the number of primary reviewers per grant application is statistically underpowered [30]. For example, a substantial difference in final scores that causes a grant application to be ranked in the 15–22 % range (e.g., scores of “2” to “4” during a CSR/NIH grant review) demonstrates inconsistency that lowers the quality of the review process. This lack of consensus is arguably the greatest problem with our current NIH review system, and I would contend that is the responsibility of the reviewers to address this problem by improving the quality of the review.

Refrain from Making Definitive Statements Based on Assumptions, Especially Regarding Areas Beyond Your Research Expertise

Making assumptions is the easiest way to lead to (collegial) arguments at the review meeting. Examples include basic science researchers who make assumptions about clinical practice in radiology centers or related medical disciplines, or researchers who have expertise with some imaging modalities who make assumptions about the technical aspects of other imaging modalities. Instead, a reviewer can mention concerns and assumptions during the discussion at the review meeting and ask others for clarification, which is more efficient and collegial. Part of the benefit of

being a reviewer is learning from other reviewers. The information gained at the meeting can then be added to the written critique.

Refrain from Writing Rhetorical Questions

Rhetorical questions in a written review can often be misinterpreted as argumentative, which may reduce collegiality during the review process. More importantly, rhetorical questions often unnecessarily discourage the PI. Rhetorical questions can almost always be rephrased as statements.

Avoid Stating “It is unclear...”

Some grant applications can appear to lack information, occasionally due to page space limitations. Some omitted information may seem obvious or less important to the PI who is typically an expert with the advanced research method and yet may seem important to a reviewer who may not be an expert with the specific research method. This situation often results in a reviewer stating “it is unclear...” with a description of the lack of information that leads to a lack of clarity. Some reviewers who have an overall impression that a grant application is not exceptionally strong, but cannot find specific weaknesses to justify their impression, occasionally default to statements starting with “it is unclear...” that generates an apparent weakness in their written critique [9]. In my opinion, statements such as “it is unclear...” are a sign of a poor review, because reviewers can make this type of statement about any grant application. Fellow reviewers must decide which grant applications are the most meritorious (relative to the ideal grant), so types of statements that can be made about any grant application fail to help fellow reviewers with their decision process.

Refrain from a Detailed Budget Evaluation

While reviewers can provide expert opinions about major inconsistencies in budgets relative to the general costs of research, making detailed budget recommendations during a scientific review meeting can be problematic. In particular, scientific reviewers often have insufficient information to gauge the percentage effort of research team members listed in the budget. Researchers do not dedicate the same number of hours each week to their profession, so that the concept of 100 % effort does not represent the same number of hours for each researcher. Also, the effort needed by each member of the research team may evolve during a multi-year project. Finally, many researchers are supported by a patchwork of funding sources, and activities of multiple research projects can be interrelated, further complicating the interpretation of percentage effort. More generally, scientific reviewers should focus on science, and detailed budget considerations are better addressed by other experts at CSR and NIH.

Conclusions

These recommendations are intended to assist grant reviewers with interpretations of the grant review procedures and scoring criteria, especially for new reviewers, and for reviews of biomedical imaging grant applications. In addition, these recommendations provide guidance for performing reviews in an efficient way. Although many reviewers provide outstanding reviews, more effort needs to be placed on providing the best possible review for all grant applications; discussing grant reviews with the intent to change the scores; and reaching consensus for the top ~22 % of grant applications. These improvements are important because the quality of the review system critically depends on the quality of the reviewers.

Acknowledgements. The subjective opinions in this commentary are entirely derived from the author. The author would like to thank Drs. Lee Rosen, Mehrdad Mohseni, and Eileen Bradley of the Center for Scientific Review for their objective guidance to all grant reviewers of biomedical imaging grant applications. This work is dedicated to the memory of Dr. Lee Rosen [31].

Compliance with Ethical Standards

Conflict of Interest

The author declares that he has no conflict of interest.

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