

## CSR Director Asks for Peer Review Suggestions; He Gets What He Asked for — and Now Asks for More!



Dr. Toni Scarpa

“Your move to speed reviews of grants applications is great!” wrote one scientist, following the publication of a recent *Science* article by Center for Scientific Review Director Toni Scarpa, who described CSR’s pilot effort to cut six weeks from the review cycle and other efforts to improve peer review at the Center.

Another writer was more emphatic: “NIH must be completely delusional to state that your goal is ‘preserving the rigor and fairness of NIH peer review(!)’ That process is broken. I see lots of funded work that is trivial . . . a waste of money . . . while I was never able to get a grant for my . . . studies due to reviewer ignorance and bias.”

A scientist from a large medical school called it both “pleasing and sane” that a government official recognizes the problems: “R01 grants applications are insanely long [and] the nine month turnaround is crippling.”

Others also had caveats, complaints or, mostly, additional suggestions. At the end of his *Science* article, Dr. Scarpa had provided his e-mail address and invited comments—and he got over 700 of them! Many were impassioned, long, detailed and even philosophical. A representative sampling follows.

**Shorten Applications**—“My two cents,” wrote one scientist: “Instead of doing science, scientists in this country spend months reading grants and writing them. They are just too long [and] now that NIH is just funding about 10 percent of new and renewing applications, everyone has to apply twice or three times for the same grant dollars.”

Another writer said, “Cap the grants at ten pages and tell reviewers to concentrate on the broad questions . . . rather than whether the applicant has experience in all the techniques. Pretty soon we’ll be asked to show preliminary data that we can measure pH!”

An experienced reviewer agreed, “Having served [as a reviewer] both at NIH and the Wellcome Trust in the UK, I’ve observed the scrutiny afforded is quite similar but the biggest difference is that the US’ 25 pager was no more than six at the Wellcome Trust. This made it easier to recruit reviewers.”

Dr. Scarpa replied, “I have about the same goal . . . but it will be difficult.” NIH is working on plans to develop options for shortening applications and for aligning them better with the review criteria. All stakeholders—including NIH extramural staff and leaders from the scientific community—will be consulted and involved to ensure that any changes are good ones.

“The applications should be 15 pages [and] yes, the appendix should be eliminated,” said a professor at a southern university, who also lamented that “now many researchers have all or most of their salaries paid by NIH. This has led to universities to expect faculty to bring in their

salaries and then to use the freed salary and indirect funds to hire two new faculty, constantly expanding their research faculties. This has resulted in a house of cards with many faculty having no intrinsic value to the university beyond their ability to bring in grant funds.”

Another writer agreed: “The universities have turned NIH into a cash cow with salary recovery and indirect costs [and made success at getting grants] the sole determinant of tenure decisions, and the basis for future growth. Now that a contraction is at hand [and] the payline drops, the flaws in the review process—there is no perfect system—are magnified. Things will get ugly.”

## Other Suggestions Received

**Be Careful Implementing Electronic Submission**—“[It] seems to be a first step to lessen the burden of 80,000-plus applications plugging the pipelines.”

A second scientist agreed, but with some fear of glitches. “We are all looking forward to the new NIH submission system, and we have for years used electronic systems for our manuscript submissions to scientific journals. However, if there is the slightest doubt that the new system will work flawlessly, please postpone its introduction.”

The planned introduction of the new electronic submission system for R01 grants applications has since been [postponed from this October to February 1, 2007](#), to “benefit both NIH and the applicant community by providing both with additional time to address business process and internal infrastructure changes needed to support this large endeavor.”

**Use a Staged Review**—“As with Defense grants, the NIH applicant would submit a two page white paper or quad chart that would be read and scored by all the study section members. High-scoring applicants that pass this stage would get good feedback and write complete proposals.”

**Extend or Renew the Grants of Senior Reviewers**— “You would [then] have your pick of the best.” Another scientist suggested that “one way of enticing the best scientists to review would be to award permanent study section members an automatic competing renewal on one of their grants.” This, Dr. Scarpa said, is a recurring idea that might solve one problem but “probably would short-change other researchers and be considered unfair by other researchers, the public and Congress.” In addition, the free ride “could get very expensive—it could break us.”

**Monitor Quality**— “Investigators would appreciate a description of how CSR monitors the quality of reviews and what steps an investigator can take when he/she feels that a proposal didn’t get an informed . . . fair review. (Please note I have mostly received informed, insightful and fair reviews.)”

### CSR Expands Search for Input

To get fresh ideas from more stakeholders, we plan to—

- Invite leaders of scientific societies to attend open houses at CSR.
- Offer to discuss peer review at more scientific meetings.
- Interview retiring study section chairs.
- Have the CSR Director or senior staff attend most study sections once a year.

### Your Comments Count!

Contact Dr. Scarpa directly via e-mail or phone: [Scarpat@csr.nih.gov](mailto:Scarpat@csr.nih.gov) or (301) 435-1114.

Dr. Scarpa noted there is a formal appeals process, and researchers with specific concerns may discuss their options with their program officer. CSR also recently instituted new efforts to assess its study sections, which will supplement the comprehensive reviews scheduled every five years:

1. Each CSR Integrated Review Group will be reviewed every two years by an internal review group to assess them and address any complaints received. Substantive issues/solutions will be presented to the NIH Peer Review Advisory Committee.
2. Local problems—such as workload overloads in individual study sections—will be addressed by working groups that include senior members of the extramural scientific community and appropriate NIH and CSR staff. Solutions will be presented to the NIH Peer Review Advisory Committee.
3. The CSR Director now reads all summary statements produced by the Center and interviews all retiring study section chairs for feedback on the functioning of the study section and on ways of improving peer review.
4. The CSR Director and senior staff members also have committed themselves to independently visit the large majority of study sections at least once a year.

**Address Concerns About Ad Hoc Reviewers and Special Emphasis Panels**—“I would like to see you address the issue of the large number of ad hoc reviewers . . . I believe [they] severely compromise effectiveness, since there is little continuity when grants come up for review,” one writer said, while an NIH lab chief wrote Dr. Scarpa, “The Special Emphasis Panel is, to me, one of the great secrets of the review process with little transparency and potential for abuse. [It] needs to be examined.”

However, an outside scientist said, “As an ad hoc reviewer both on regular panels and special emphasis panels with fewer than ten reviewers and far fewer grants, I find the reviewers in SEPs are more engaged . . . and [more likely to] understand the science.”

Special Emphasis Panels are used to review applications when no study section has the expertise to review them or to review those that would otherwise go to a study section on which the applicant serves, resulting in a conflict of interest. CSR recently completed a study of how reviewers fare when their applications go to a SEP. The study shows that reviewer applications received scores comparable to those they received from the given study section before they became a member.

**Let Reviewers Share a Position**—The writer just above also said, “I like the view of John Lenard on page 36 of the same issue of *Science*. I would be happy to review grants once every other year as Dr. Lenard suggests, not only to fulfill a responsibility but because it’s interesting.” A dean of pharmacy suggested that CSR “allow regular study section members to share a position . . . Sharing a position (alternating rounds) would minimize time and, I believe, allow more high quality researchers to serve—thereby addressing one of the concerns in your article.”

**Dispense with Panel Meetings** —“Have each application reviewed by a larger number of reviewers who would submit electronically a score representing their level of enthusiasm for the application.” Dr. Scarpa notes there would be less accountability if reviewers only submitted

scores, and applicants and the NIH institutes would have little to guide them when an application's faults and merits are not clear. However, CSR is conducting a series of pilots to test alternative/electronic review venues that could enable study sections to recruit reviewers that cannot or prefer not to travel to a regular review meeting.

**Revisit Triage**—Another generally positive letter had one complaint: “Triage [in which clearly poor applications are dropped without a full panel discussion] is psychologically debilitating to investigators. [Instead] the study section could be run differently and critiques could follow a much shortened format.” Dr. Scarpa replied that he felt triage to be necessary “because reviewers cannot stay longer than a day and a few hours in Washington, and their time is better used to focus more discrimination on the applications that have any chance of being considered for funding. In the absence of triage, we often would have less than a few minutes to discuss each grant application.”

**Keep Discussions to Scientific Merit Only**—“Reviewers are there to judge scientific merit only, not to make funding decisions. When reviewers are given the approximate [percentile] rankings for any given score . . . [you get] a disconnect between priority scores and percentile rankings—everyone aiming at the fundable score.”

**Give New Researchers a Break** —“Increasingly anxious beginners are frequently tortured with repeated resubmissions containing minor revisions [a situation which is counterproductive] since it's mainly through the young that the most unexpected and productive things happen in basic research . . . For years, NIH administrators have been wringing their hands about the embarrassingly low number of young researchers in the system. Well, duh, go figure!”

Dr. Scarpa said, “You make a good point, but we do try to do a lot for new researchers. First, we say to our reviewers, look for innovation as a factor. Second, we say judge an applicant by his or her career stage—by which we mean don't require a track record for a new researcher but go by training and rationale. Also, most institutes give new researchers a break, often a 10 percent break. NIH also reserves a percentage of grants for new researchers and is launching the new K and R award to support researchers very early in their careers, while still being mentored. And, finally, our own CSR pilot aimed at shortening the review cycle is specifically and only for new investigators.”

**Keep Up the Good Work**—“This is great news,” wrote a scientist from the northwest. “We sincerely appreciate the change—sending summary statements within a month of the panel review,” or within a week for new researchers in a limited pilot study. “I look forward to these enhancements of the CSR process,” wrote a scientist at an east coast university.

## **Comments and Suggestions Are Still Welcomed**

You may contact Dr. Scarpa via e-mail ([scarpat@csr.nih.gov](mailto:scarpat@csr.nih.gov)) or phone (301-435-1114).

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## **About CSR**

The Center for Scientific Review organizes the peer review groups that evaluate the majority of grant applications submitted to the National Institutes of Health. These groups include experienced and respected researchers from across the country and abroad. Since 1946, CSR's mission has been to see that NIH grant applications receive fair, independent, expert, and timely reviews—free from inappropriate influences—so NIH can fund the most promising research. CSR also receives all incoming applications and assigns them to the NIH institutes and centers that fund grants. For additional information, go to our Web site—<http://www.csr.nih.gov>—or phone 301-435-1111.