

American Society for Biochemistry and Molecular Biology, Office of Public Affairs

The American biomedical and biological research enterprise has made the U.S. the unquestioned global leader in scientific innovation and productivity. The peer-review system is one of the crucial pillars of this research enterprise. Peer review is a multi-tiered process by which applications for funding are reviewed by colleagues and scored based on scientific merit and innovation. This system ensures that only the most scientifically meritorious ideas and concepts receive federal funding. Peer review is used by every major federal funder of scientific research, including the National Institutes of Health and the National Science Foundation, and it is largely free of fraud and conflict of interest.

How does peer review work? The process begins when scientists submit grant applications to funding agencies. These agencies assemble a group of 20-30 scientific experts, termed a study section or review panel, to evaluate grant applications. The study sections score each grant based on the importance of the work, the feasibility of the experiments and the ability of the applicant to complete the work in a timely fashion. Grant applications that are highly innovative and show a clear relevance for the scientific endeavor are scored as meritorious. Study sections report their scores to the funding agency, which then evaluates the applications again to ensure that the objectives fall

