



Transparent Peer Review of Grant Applications

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Dear Editor-in-Chief

Peer-reviewers for funding allocation are under the same obligations as referees who critically and transparently review the assigned manuscript (1). Therefore, transparent peer review of grant applications is also needed because the transparent funding of novel and innovative research projects could make high-impact manuscripts and make great progress in science.

In European Research Council (ERC) Starting Grants for junior researchers, the success rate is ca. 10% and there are no transparent peer-reviews (assessment report) (2). Therefore, this non-transparent peer-review process fails to find the high-risk/high-gain breakthrough research projects.

In addition, a recent report published in *F1000Research* (offering both open identities and open reports) shows some evidence of a bias against innovative research projects, age bias and cronyism in the current non-transparent peer-review process (3). To improve the effectiveness and accountability of the grant selection process, funding agencies need to implement or pilot the transparent peer-review process that opens assessment reports to the public.

Furthermore, the scientific community has to explore new ways of improving the current and

conventional proposal-based grant system as well as the transparent peer-review process. For example, a self-organizing funding allocation (SOFA sharing research funding with other researchers) system was proposed to save the cost (both in terms of time and money) of public fund distribution (4). However, this system is difficult to apply to government-driven 'top-down' research projects or ones addressing public and economic concerns such as health care, natural-resource availability and air pollution.

One of the most important goals of scientific research is to work for improving society as the public (taxpayers) expects. For solving society's problems, the high-quality researches and collaborations between different research fields are needed such as One Health approaches to overcome the antibiotic resistance of super-bugs, but this SOFA system could not fund these researches.

In addition, South Korea has invested more than 4% of its gross domestic product (GDP) in science and technology, but in 2017, around 94% of the national research budget (US\$19 billion) has gone to the top-down projects (5). Although this system can support well curiosity-driven researches and ensure a stable funding source for



early-career researchers, countries with many top-down projects are difficult to adopt this system throughout their research funding systems. The transparent peer review of these top-down projects is also needed instead of a self-organizing funding allocation.

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Conflicts of interest

The authors have no conflict of interests to disclose.

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