Research Support Supports Research Support

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A brief review of medical literature reveals great advances in the accuracy and reliability of medical articles. However, strict quality control and the increasing demand for a precise scientific and statistical basis for findings and ideas have created a situation in which extensive financial resources are required for publication of original research work [1-3].

Today it is not enough to present brilliant and original discoveries, or interesting and unusual observations; it is also necessary to provide precise scientific and statistical proof of sufficient breadth which, as mentioned before, requires great financial resources [1-3].

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1990

Fig. 1. The percentage of articles supported by grants-in-aid. ■ = Dermatologica; M – Archives of Dermatology; B = Journal of Investigative Dermatology.

Increased Proportion of Supported Papers

We investigated the percentage of original research work which received grants-in-aid from funds of any kind. We have compared three different dermatological journals over 40 years. The comparison indicates two main points: over the course of the last 40 years, the relative portion of work supported by grants has increased significantly (fig. 1).

There is a correlation between the impact factor of the journal [4], the relative number of papers which are related to ‘basic’ research as compared to ‘clinical’ research and the percentage of works which are supported by grants.

The Risk of a Vicious Circle

There is no doubt about the profound impact that grants and awards have had on the growth and development of dermatological research [5]. In fact, it is very difficult to imagine basic research without financial support from external sources. The questions must be asked: are we not paying a price for this financial support, and is the price proportionate to the benefits?

Under our political system, any recipient of public funding is subject to scrutiny concerning the expenditure of this money. The peer review process in biomedical research plays a key role, not only in determining what is to be published but even before this in determining which projects are to be funded by public money. It is evident, therefore, that in order to obtain financial support, the research work must be judged by competitive peer review boards composed of the same

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people who review articles for scientific publications.

This system examines the researcher’s ability to do exacting research at a high level of reliability and accuracy. Unfortunately, the means available to the researchers, the scope of work, his or her academic level, formal education and affiliation may be influential besides the originality and creativity of the proposal.

As a result, the research is focused on a limited number of well-established research laboratories (let us call them ‘privileged centers’). A vicious circle is created in which the privileged centers obtain extensive funds, which help to raise the standard of their professional quality and equipment and thus improve their chances of obtaining yet more funding. On the other hand, requirements for thoroughness and precision in research work are becoming increasingly demanding. Researchers not connected with such privileged centers find it extremely difficult to present ideas, observations or discoveries of any kind, because they cannot meet the maximal criteria set by the privileged centers.

A great deal of work which has changed the face of medicine and contributed to its advance would almost certainly be rejected today and not accepted for publication. For example, the original article of Wassermann et al. [6] describing a new serodiagnostic reaction for syphilis or the outstanding therapeutic discovery of all time in dermatovenerology, the use of penicillin in syphilis by Mahoney et al. [7] in 1943, would almost certainly be rejected now by any scientific journal. I have no doubt that many ideas and discoveries are lost today for lack of ability of the researchers to cope with the extreme requirements of the scientific community and the extensive demonstration of proof demanded for publication of new systems, treatments or drugs.

As shown in this paper, there has been a steady rise in the number of publications supported by funds. Today it is extremely difficult to develop and publish an idea or discovery without the support of such funds.

It seems that this trend will continue and gain force in the future. At the same time, academic freedom will decline and we will see fewer and fewer great discoveries or brilliant, provocative, innovative and revolutionary ideas. Instead, we will sink into boring mundane and repetitive work in an attempt to fulfil the strict criteria and demands of a group of senior scientists who control both, the scientific publications and the sources of funding.

References

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Editor's Comments

Many points raised by Wolf et al. are well taken. They illustrate the concern of many young and bright colleagues who think they cannot fully express their skills due to the 'vicious circle' described. One way for them to avoid being kept out of the access to publication is to obtain grants for training in the 'privileged centers' as quoted by Wolf et al. There are two other ways to limit the vicious circle:

One is in the hands of the potential author. Dermatology still allows good clinical research without having extensive basic science support; the problem with a good clinical research is the time needed for providing significant results: many are discouraged to embark in sound clinical prospective studies as they wish to have them published as quickly as possible as it is necessary for their personal curriculum vitae.

Another way to limit the vicious circle is in the hand of the editors, who have to keep a very open mind when the observation appears to be sound and interesting; this is the trend many editorial boards take whenever possible.

The comments of Wolf et al. raise the ever debated issue on the peer review system; many think this system is similar to Sir Winston Churchill's views on democracy, a bad system, but the only one that is acceptable.