



## Grant writing for innovative medical research: Time to rethink



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Millions of people and billions of dollars are involved in health and medical research across the globe, but it could be argued that all this investment has not transformed health care or reduced the key health problems [1, 2]. Expenditure of life science research in 2010 was US\$240 billions with United States of America as the largest funder (US\$70 billion in commercial and US\$40 billions in governmental and non-profit) [3-4]. Chalmers and Glasziou reported that US\$200 billion was wasted in 2010 out of the US\$240 billions, as research findings were unusable and reports inaccessible [5]. It is not exactly clear who is the blame, the scientists, funding agencies, governments, politicians, commercial medical companies, medical journals, editors, reviewers or institutional/government ethics committees or health-care managers.

Regardless of the reasons for this waste of research funding as researchers we need to write the best possible grant application. Therefore, highlight some important steps, which should be considered in the grant writing process from our experience of obtaining grants. At the same time the average grant application in the medical field has a low chance of 1:8 to 1:12 of getting funded.

### Ten tips for successful grant writing

1. Check whether you are eligible to apply and do not apply for a funding program, which is outside your area of expertise. Find out the abstracts of previously funded projects or even the full text of successful research publications to improve your own idea.

2. Your application must start from a good idea, however, your wonderful idea will not be funded if it does not fit the main goal(s) of the funding programme. We advise you to read background information on the funding body's web pages and to make contact with the funding agency to check that your idea is eligible.

3. Make sure you understand the key elements of the grant application and that you address them. These elements are often used by reviewers and assessors for the funding body to evaluate proposals, elements such as: (a) Scientific merit;



(b) relevance of your idea to the programme's priorities; (c) societal impact of the proposed research; (d) strength & composition of the academic or research team; (e) overall plan for administrating of the project; (f) expected scientific outcomes; and/or (g) the dissemination plan.

4. Think like a reviewer. Reviewers will be experienced scientists in this field who evaluate each proposal according to its strengths, weakness, probability of success, qualifications of personnel, etc. Researcher should prepare the proposal logically and clearly to help the review process and reviewers.

5. While writing the proposal project summary or abstract must be clear, concise, well articulated and logical. Organize proposal according to the outline in funding agency application form. Background should be established the need for the project with a reliable review and literature. The most important in any proposal is overarching hypothesis (or goal), specific aims or objectives that test the hypothesis, methodologies with associated timelines, and expected outcomes and impacts. This part decide the main strength of your research and grant application. But also make sure the grammar and style are correct, make sure all the references you cite in your application are actually listed in your reference list.

6. Goals and expected results must be directly related and an impact on the priority of the funding agencies programme within timeframe of your research proposal or shortly afterwards.

7. It should be clearly written about how you chosen methology and proposed research methods will lead to a successful project.

8. Formulate an appropriate budget with a strong justification for all aspects of costings.

9. Proposal must be guided and checked by a group which includes someone who is grant recipient, a subject expert/ colleague, a methods experts, be it a statistician/ a health economist or a qualitative researcher and medical writer.

10. Grant application form must be completed and corrected at least three weeks before to allow the thorough proof-reading listed above in (9) and submitted on time/ before the deadline.

#### **Effective web resources for grant writing**

There are various online resources: for example eCivis Grants Network which is a subscription-based service listing profiles of public and private sector funders. They work with an

exceptional Client Advisory Board and maintain strong partnerships with government associations and leaders. Here researcher can access several high quality guidance, free videos and other material.

Medical research oriented institutions should possess a separate high quality research and ethics committee constituted by efficient research and publication background clinicians, physicians, nurses, heath and allied sciences personals including statisticians. Prime target of this committee to improve the quality of research by reviewing and approving the research proposals, grant applications, and research manuscripts before publication. These committee members should be getting it trained by international workshops, conferences and courses. The additional role of such committees is often to train institutional researchers in research and successful grant writing to make a substantial investment in the creativity, vision and promise of the institution through that better health care.

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