

## You have a (paediatric) research idea: How to fund it in Belgium? The 6 Be's of grants-woman-man-ship.

Pierre R. Smeesters<sup>a,b,c,d</sup>

<sup>a</sup> Department of Paediatrics, Brussels University Hospital, Academic Children Hospital Queen Fabiola, Université libre de Bruxelles, Brussels, Belgium

<sup>b</sup> Molecular Bacteriology Laboratory, Université libre de Bruxelles, Brussels, Belgium

<sup>c</sup> Department of Paediatrics, University of Melbourne, Melbourne, Australia

<sup>d</sup> Tropical Diseases Research Group, Murdoch Children's Research Institute, Melbourne, Australia

pierre.smeesters@huderf.be

### Keywords

Research grant proposal; research funding

### Introduction

If we may dream about environment where research projects are easily financed, the reality is different for everybody, everywhere. Obtaining research funding from local, regional, national or international funding bodies requires dedication and persistence to "survive" peer-review.

Your research proposal will be read, and assessed, by experienced clinician-scientists. Reviewers have been running these kinds of research projects for a long time and know the difficulties in doing so. They can easily see the weaknesses, potential flaws, or foreseen hurdles of your proposal.

Although never easy, possibilities to fund your research idea are greater than one might think. The purpose of this insights paper is to provide reflections about how the funding process goes together with suggestions to reinforce your research proposal and hopefully make it successful.

#### 1. Be creative: There is no good grant without a good idea (but good idea is not enough)

Modern society apparently loves to run, and our profession is no different. The caricature of a (bad) research project is: it arose from half an idea because you had to publish a paper to get your diploma-contract-promotion, has obviously been written the night before submission, you had no time to discuss it with anybody and could not finalize neither the methods nor the conclusions. This kind of half-prepared submission is easy to identify and has very little chance of success.

Good ideas need time. Discussions. Debates. All which being obviously difficult to organise in our paediatric clinical busy environment. However, with some forward thinking and organization, it is not impossible either. Some projects are "maturing" for years. First, look in the scientific literature for what has been already done on the topic. It will provide you with some background overview and prior attempts to answer your question. Focus on understanding more precisely the issue you want to work on. Who is affected? In what ways are they affected and to what extent? Why is the problem significant? Why is the problem even occurring? It will refine your research question and will pave the way for the appropriate methodology. In terms of methods, you can refer to the 5W questions: **Who? What? When? Where? How?** Be rigorous and factual in terms of who will do what, when, where and how. Spending more time at the very beginning of a research project is always worthwhile.

#### 2. Be a team: Don't do it alone

Put your good ideas on paper and discuss it with as many people as possible. An idea must be exposed to different people, with different

backgrounds and expertise. Present your project to your peers to see if they understand it. Present your project to senior paediatricians to see if they are convinced by it. Look for the opposition, the "other point of view". The useful colleague is that critical one that will provide constructive criticisms and will share her/his experience. Listening to everybody's comments is wise, agreeing with everybody's idea is ineffective. Seeking those discussions will make your grant stronger and will help you learning how to present it best. If you cannot explain well what you want to do, it probably means that you are not ready yet.

#### 3. Be convincing: Precision, rigor and feasibility

A reviewer will never ask you to solve or know everything. What is your actual level of expertise and experience in this specific topic? Don't over pretend, it is most of the time counterproductive. If you are new to the research field, say it and present a convincing collaborative team to support you. There is not much we can do efficiently alone in bio-medical research these days so your collaboration network must be presented in all areas needed for the project success (sustained by identified facts such as co-design of the project, statistical support, previous common publications, ...).

One of the key questions a reviewer will ask relates to the feasibility of the proposed project to reach its primary objective. How rigorous is the methodology of your proposal? Will the selected study design, the team in place and the overall structure be able to conclude the research? When possible, present potential alternative approaches (plan B) if/when problems happen. Don't hide difficulties, they are inherent to any research process, but show that you have seriously thought about it and have ideas for potential solutions.

#### 4. Be attractive: Your grant needs to be pleasant to read and extremely clear

When sitting in a grant review panel, reviewers receive a large amount of relatively complex grant proposals. Lots of reading for them to do late at night. Many grants are of good quality so your grant must be attractive for the reviewer to become your best advocate in the funding allocation discussion.

You must be clear. Is your grant understandable by a non-specialist? Nobody likes to feel stupid, and grants sometimes are hard to understand. Don't overestimate the knowledge level of any reviewer in your specific topic. What is obvious for you may not be so for the reviewer.

Prefer the use of short sentences (bullet point arguments can sometimes be of great value). Grant proposals are not book literature and long sentences rarely help. Avoid acronyms and abbreviations. They vary according to topic and are unpleasant for the reviewer because unclear. Make your point straight at the beginning of each section/paragraph. Use bolded or underlined font to highlight the key “concluding” sentence of your sections (often a good idea to present in 2-3 clear sentences what you will/have explained in more details in the paragraph). Repetition of the key points is necessary. Reviewers sometimes overlook the proposal and key points should be visually attractive. When reading many grants, the reviewer is attracted by visual pictures, illustrations, font variations, colours, boxes and tables. Adding a graphical abstract that summarizes your project is of great value. It takes some time to draw but can really help crossing the funding line. Use boxes and Gantt charts to highlight specific topics and timeline-milestones respectively. If your grant contains technical or highly specialized data/methods,

consider presenting them outside the main text frame. It is good to have different layers of understanding of your grant. The first layer must be very simple (if you have lost the reviewer after the first page, so is your proposal). But you also need to show that you know what you are talking about. So, one trick is to put the “technical” complicated stuff aside (in a figure, a box, a supplementary material -whatever- but visually different from your main text). The interested reviewer can read it, but the non-interested reviewer can easily avoid it. And finally, you must respect the format and recommendations of the funding body. A 5-page proposal cannot be 6 pages long. Do not expand margins or use lower font but rather simplify the message if needed.

#### 5. Be strategic: Apply for funding with both ambition and reason

You have a great idea, a rigorous and thoroughly designed study protocol, and a beautiful, clear and well-illustrated grant proposal. Where to submit it now? The different funding schemes certainly have variable

**Table 1:** University related funding foundation or useful websites

University /research agency	Useful Websites
 <b>Universiteit Antwerpen</b>	<a href="https://www.uantwerpen.be/nl/onderzoek/beleid/financiering-onderzoek/">https://www.uantwerpen.be/nl/onderzoek/beleid/financiering-onderzoek/</a> <a href="https://www.uza.be/uza-foundation">https://www.uza.be/uza-foundation</a>
 <b>VRIJE UNIVERSITEIT BRUSSEL</b>	<a href="https://www.uzbrusselfoundation.be">https://www.uzbrusselfoundation.be</a> <a href="https://www.uzbrussel.be/web/onderzoek/fonds-willy-gepts">https://www.uzbrussel.be/web/onderzoek/fonds-willy-gepts</a>
 <b>UNIVERSITEIT GENT</b>	<a href="https://hiruz.be">https://hiruz.be</a>
 <b>KU LEUVEN</b>	<a href="https://www.kuleuven.be/fondsenwerving/wat-kunt-u-steunen">https://www.kuleuven.be/fondsenwerving/wat-kunt-u-steunen</a>
 <b>LIÈGE université</b>	<a href="https://www.fondationleonfredericq.be">https://www.fondationleonfredericq.be</a>
 <b>UCL Université catholique de Louvain</b>	<a href="https://www.fondationsaintluc.be">https://www.fondationsaintluc.be</a>
 <b>ULB</b>	<a href="https://www.belgiankidsfund.be/fr/">https://www.belgiankidsfund.be/fr/</a> <a href="https://www.iris-hopitaux.be/fr/le-reseau-iris/nos-structures/iris-recherche-2">https://www.iris-hopitaux.be/fr/le-reseau-iris/nos-structures/iris-recherche-2</a>
 <b>BELGISCHE VERENIGING VOOR KINDERNEUROLOGIE SOCIÉTÉ BELGE DE PÉDIATRIE</b>	<a href="https://bvksbp.be/en/">https://bvksbp.be/en/</a>
 <b>fwo</b>	<a href="https://www.fwo.be/en/">https://www.fwo.be/en/</a>
 <b>fnrs LA LIBERTÉ DE CHERCHER</b>	<a href="https://www.frs-fnrs.be/en/">https://www.frs-fnrs.be/en/</a>

success rate. In a nutshell, the more international the funding body is, the more competitive the selection will become. It is important to discuss with more experienced colleagues around you, who have a broader vision of funding possibilities and may give you relevant advice and select with you the appropriate funding body. Be ambitious but don't be unreasonable. Build your research career by starting with some local small-scale funding and then expand with more competitive national and international grants. You can often look at the success rate of the grant scheme on the dedicated websites. You can also look at the profile of previous grant recipients to assess whether your experience fit in the "profile" or not. Table 1 summarises a non-exhaustive list of Belgian research foundations. Contact them and discuss your plans and funding strategy. We also have in Belgium many very active sub-specialities foundations that fund research project in specific areas. Contacting the head of sub-specialities will ensure knowing all dedicated funding possibilities. Some, but not all, offer encouraging success rates to emerging researchers.

## **6. Be persistent: Hang it there**

Most funding applications are unsuccessful. Success rates varies from call to call but are overall rather low (some are lower than 5%). Several brilliant research proposals have been rejected a few times by research agencies before being successful. Don't take any negative output personally. Frustration is unfortunately part of the process, but the aim is to be persistent, include any useful reviewer comments and re-apply with a stronger-updated research proposal. If no formal feedbacks are provided by the agency, never hesitate to ask for an explanation about the reasons for rejection. You either get the research money, or you learn...

## **Conclusions**

Grantsmanship, grantswomanship is an iterative learning process. We try things, often fail but also have some success. It is overall a fun, interesting and creative medical approach. Moreover, the process in itself together with the results that our research deliver are crucial for an innovative, rigorous, and efficient care of the Belgian children we take responsibility for.

## **Acknowledgments**

This short insight was first presented at the 2022 Belgian Paediatric Society meeting. I am grateful to the Belgian Heads of Paediatric Departments; Gunnar Buyse, Inge Gies, Stéphane Moniotte, Marie-Christine Seghaye, Sabine Van Daele and Stijn Verhulst for useful, pleasant, and constructive collaboration on paediatric care, research and education. I would like to also thank Ann De Guchtenaere, Tyl Jonckheer and Marc Raes, among many other Belgian colleagues, for their relentless efforts to defend childhood and unite Belgian paediatrics energies.

## **Funding**

The work is supported by the Belgian Fonds National de la Recherche Scientifique (FNRS) research grants (PDR T.0255.16, CDR J.0019.17).

## **Conflicts of interest**

No conflict to declare.