fondation BOTNAR

The future now
for young people worldwide

Research for improving young people's health and wellbeing

Results and learnings from a biomedical and health research grant review

June 2025

fondationbotnar.org

Research for improving young people's wellbeing

Results and learnings from a biomedical and health research grant review

Since its inception in 2003, Fondation Botnar has supported biomedical and health research for children and young people. This engagement builds on the Botnar family's long-standing commitment to supporting biomedical research activities in various fields. Between 2016 and today, Fondation Botnar has funded 31 grants classified as biomedical and health research grants. These include the establishment of the Basel Centre for Child Research (BRCCH) and the COVID-19 research grant for the BRCCH. Excluding these two bigger investments, the other 29 grants were awarded a total of CHF 49.3 million.

Based on its refined philanthropic strategy, Fondation Botnar will bundle its engagement in biomedical research to support two independent entities: the BRCCH and the newly established Botnar Institute of Immune Engineering (BIIE).

Objectives of the review

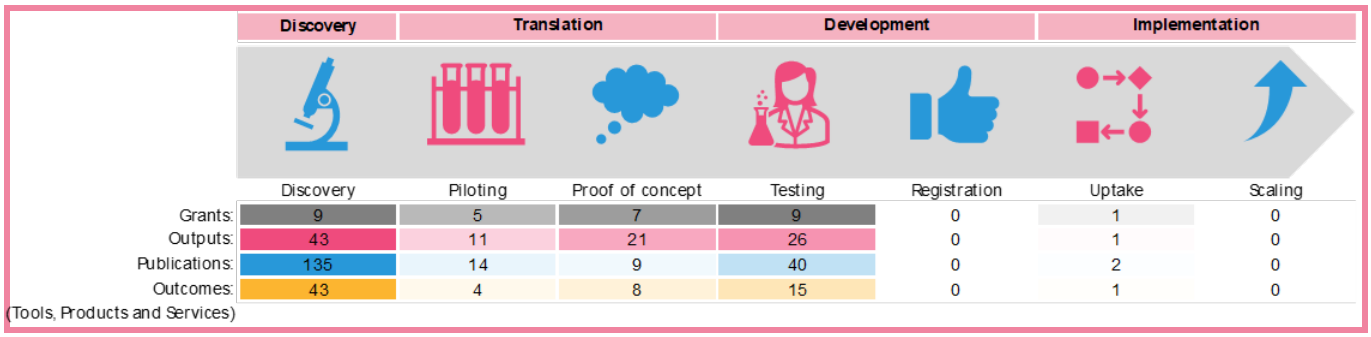
Fondation Botnar issued a review of the 31 grants with the aim of:

1. Identifying the contributions of the grants to innovation, validation, and application within the Research and Development (R&D) value chain.
2. Generating learnings to inform:
    - any future investment of Fondation Botnar in research activities (e.g. implementation science in themes or research on young people's wellbeing)
    - partners, funders and stakeholders active in biomedical and health research
    - Fondation Botnar's philanthropic work more broadly, e.g. how partners can apply a systems lens and contribute to creating more favourable conditions, by helping

bridge the "evidence-to-policy-to-practice" gap or preparing the integration of their innovation into the relevant systems.

Research results

Most of the funded work focused on diagnostics and treatment (13 grants) as well as adolescent health (5 grants). The average volume of CHF 1.7 million per grant was relatively modest. It reflects the fact that most grants covered the early stage of the R&D value chain, i.e. from discovery to the development testing phase, and only one covered the implementation and uptake phase. Figure 1 shows the R&D value chain and where the grants sit along the path from discovery to implementation. Forty-five per cent of all grants succeeded in moving from one to the next stage in the R&D value chain.



	Discovery	Piloting	Proof of concept	Testing	Registration	Uptake	Scaling
Grants:	9	5	7	9	0	1	0
Outputs:	43	11	21	26	0	1	0
Publications:	135	14	9	40	0	2	0
Outcomes: (Tools, Products and Services)	43	4	8	15	0	1	0

The following key outcomes were achieved:

Forty-one per cent of all produced outputs[1] (42 out of a total of 102) were delivered under the diagnostics and treatment cluster. For instance, the partners published a total of 200 publications, with an average of six to seven publications per grant, from which 86 per cent were peer-reviewed and 57 per cent open access. The different outputs substantially contributed to the development of 71 tools, products and services, again mostly diagnostics (13), followed by scientific discoveries (11) and medical procedures (7). Among the scientific

[1] In this review, outcomes are defined as tools, products, or services that were developed as a result of the grant-funded work or to whose development the grant made a meaningful and important contribution. Outputs are results that are essential steps towards these outcomes, e.g. research data and publications, or tools necessary to develop the final products.

discoveries are, e.g. promising antibiotic candidates that have the potential for a novel class of broad-spectrum antibiotics that can treat *Mycobacterium abscessus* (a species of rapidly growing, multidrug-resistant, nontuberculous mycobacteria). As for medical procedures, researchers developed specific procedures for treating conditions affecting pre-term babies.

The findings show that the research partners have largely delivered against their set objectives, with an average of over six publications and two outcome contributions towards the development of tools, products or services per grant. These results confirm that investing in the discovery and translational stages of biomedical and health research, particularly for children and young people, can yield significant outcomes with long-term improvements and should be seriously considered by foundations and other philanthropic organisations. These early, risky stages are often underfunded, especially in research focused on young people's health. Yet, the fact that most grants end at the proof-of-concept stage underlines how costly and difficult the move into the late-stage development of products and tools is (e.g. large-scale clinical trials with humans) for which industry partners are needed. As the outcomes of discovery or translational research are, by nature, very open, many partners do not necessarily prepare the late-stage development phase early on, e.g. by reaching out to and informing political decision-makers, potential funders and industry partners about their research. Very few research partners have managed to influence policy and legislation, e.g. through participation in national technical working groups or invitations to parliament, etc.

Learnings

Fondation Botnar derives the following learnings from this review for funders and researchers:

Funders

1. Flexibility toward changing contexts: Many of the biomedical and health research grants required cost and/or no-cost extensions. This partly had to do with the delays caused by the COVID-19 pandemic. However, in the earlier stages of R&D, changes in the mechanism or approach to be tested for efficacy and safety are frequent. Therefore, funders should have some flexibility when it comes to adjusting approaches, key activities, and/or timelines.

2. Research funding for Global South partners: For the 31 analysed grants, most of the funding went to research organisations in Switzerland, the UK, and the US. The shift towards more Global South-led research needs to be addressed by design. This could be achieved by setting specific call criteria and formulations that attract researchers from the Global South, translating calls into languages other than English, paying more attention to the dissemination channels of the call, by adding webinars during the open phase of the call to share additional information and to answer open questions, and by allowing more for applications to be prepared.

For funders and researchers

3. Alignment of research questions with governments' strategic priorities is a prerequisite for achieving policy and practice impact. Public authorities and government representatives should be informed and consulted early on regarding research objectives. However, this alignment is not sufficient to ensure sustainability and integration of the solutions, as many governments face budget constraints and competing priorities. To ensure that innovations can move into the next stage of the value chain or be integrated into the system, applicants should already have the possibility to clarify in the grant application how follow-on funding could be secured at a later stage, even if not part of the proposal to be funded.
4. Policy and practice relevance of research: Only a few research partners anticipate how their potential solutions will be integrated into systems and aim to inform policy from the outset. For example, they rarely inform policy- and decision-makers regularly about their evidence or prepare the integration of their developed technological solutions into the national digital system, by considering the system requirements early on. Hence, having a team member with policy-related expertise who facilitates translating research findings into policy- and practice-relevant implications, formulates messages and engages with the policy makers is critical. Funders should also request that potential partners include key activities for stakeholder engagement and evidence-to-policy work, such as participation in technical working groups.
5. Equal partnerships: In the case of larger research projects, it is essential that partners from different sectors, disciplines and/or countries, as well as targeted populations, are involved in the project's design. Partnerships need to include organisations that are familiar with the

context where research takes place. This helps ensure that the research questions and approach will be adequate for the respective contexts. Moreover, research projects should allocate budget for capacity strengthening for local researchers, healthcare professionals, technical, and communication staff.

6. Duration of research grants: The average duration of three years for research grants often seems too short to reach the set goals, as the frequency of no-cost extensions granted to the projects indicates. This is especially the case when strategies must be adapted or the next stages properly prepared. This also holds true for *implementation* science.

Acknowledgement

We would like to express our sincere gratitude to all those who contributed to this evaluation of the 31 biomedical and health research grants funded by Fondation Botnar for their collaboration, openness, and commitment throughout the review process.

In particular, we thank those who participated in the deep dives for generously sharing their time, experiences, and reflections. Your contributions provided crucial context and depth to understanding the grants' outcomes and impact.

We would also like to thank the independent evaluators for their thoughtful analysis, rigorous approach, and valuable insights, which shaped this report's findings.