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Grand Challenges Brazil: One decade of health research funding

Grand Challenges Brasil: uma década de financiamento de pesquisas em saúde

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ABSTRACT This study assessed the funding of research conducted using the Grand Challenges Brazil strategy, a collaboration between the Ministry of Health (MS) and the Bill & Melinda Gates Foundation (BMGF), to optimize efforts in seeking solutions to global health problems. A descriptive and retrospective approach was used, based on secondary data. The study analyzed resource distribution and funded research by year, region, institutions, and types of research. Between 2011 and 2020, 75 research projects were funded, with a total investment of PPP$ 48.61 million. Public and population health research, representing 40% of the total studies, received 55.51% of the investment (PPP$ 26.99 million). Most resources were allocated to public institutions, which received 85.33% of the funds, with a significant concentration in institutions from Southeastern Brazil. The 'Eliminate Dengue: Brazil Challenge' project stood out, absorbing nearly half of the total investments (PPP$ 21.95 million). These findings demonstrated that the strategy was significant in allocating resources to public health research. Future studies should explore how the knowledge produced is being used to inform and improve health policies, ensuring that research findings effectively translate into population benefits.

KEYWORDS Health research policy. Research financing. Health research evaluation.

RESUMO *Este estudo avaliou o financiamento de pesquisas conduzidas pela estratégia Grand Challenges Brazil, uma cooperação entre o Ministério da Saúde (MS) e a Fundação Bill & Melinda Gates (BMGF) para otimizar esforços na busca de soluções para problemas de saúde globais. Utilizou-se uma abordagem descritiva e retrospectiva, baseada em dados secundários. O estudo analisou a distribuição dos recursos e das pesquisas financiadas por ano, região, instituições e tipos de pesquisa. Entre 2011 e 2020, foram financiadas 75 pesquisas com um investimento total de PPP$ 48,61 milhões. Pesquisas em saúde pública e populacional representaram 40% do total de estudos com 55,51% do investimento (PPP$ 26,99 milhões). A maior parte dos recursos foi destinada a instituições públicas que receberam 85,33% dos fundos, com concentração significativa nas instituições da região Sudeste do Brasil. O projeto 'Eliminar a Dengue: Desafio Brasil' se destacou, absorvendo quase metade do investimento total (PPP$ 21,95 milhões). Esses achados mostraram que a estratégia foi relevante na alocação de recursos em pesquisas para a saúde pública. Estudos futuros devem explorar como os conhecimentos gerados estão sendo utilizados para informar e aprimorar políticas de saúde, garantindo que resultados de pesquisas se traduzam efetivamente em benefícios para a população.*

PALAVRAS-CHAVE *Política de pesquisa em saúde. Financiamento da pesquisa. Avaliação da pesquisa em saúde.*

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Introduction

National or international cooperation in science and technology has been practiced by several countries to promote researcher collaboration, increase scientific impact, expand investment in Research and Development (R&D), and stimulate economic growth[1-4].

In this context, the government plays a fundamental role in promoting national and international connections to improve science, technology, and innovation systems[3]. According to the Center for Management and Strategic Studies, Brazil's main international scientific collaborations are with the United States, England, Germany, Spain, and Portugal[4].

Brazil's Unified Health System (SUS in Portuguese) guarantees its population free access to health care, a right established in the Federal Constitution[5]. The Brazilian Ministry of Health (MS) is responsible for formulating policies on science, technology, and health innovation, especially in areas such as industrial development, technology incorporation, human resource development, and comprehensive care at all levels of complexity within the SUS[6]. To increase the country's autonomy, enhancing the health industrial-economic complex is deemed a strategic action[5] for scientific, technological, and industrial development policy.

As such, investment in research, development, and innovation is essential to address health challenges. In 2000, the Department of Science and Technology (DECIT) was created within the MS to unite science, technology, and innovation with public health, playing an important role in Brazil's National Science and Technology System[7-9]. For 24 years, DECIT has promoted health research to generate knowledge and evidence for decision-making, contributing to the improvement of effective public policies for SUS[7-10].

Cooperation agreements were signed between the MS and governmental and non-governmental partners to continuously promote health research and innovation. The most prominent national government partners are the Ministry of Science, Technology, and Innovation (MCTI), and especially the National Council for Scientific and Technological Development (CNPq – a public foundation responsible for fostering scientific, technological, and innovation research and promoting the training of qualified human resources for research)[11,12].

International partnerships have also been established over the years to optimize efforts in seeking solutions to global health problems. The Grand Challenges Brazil (GC-Brazil) strategy was launched in 2011 as a result of the partnership between the MS, CNPq, and the BMGF[13].

The GC-Brazil strategy is a set of BMGF initiatives that promote innovation to solve major global health problems[13]. Challenges are launched with a focus on innovation to cause positive impacts, addressing problems mapped globally but from different perspectives. Starting in 2010, many countries began to adhere to the strategy, including Brazil. Operating independently but also as part of the Grand Challenges (GC) partner network, countries use the GC model to identify and support innovative solutions to global challenges, while promoting and strengthening innovation ecosystems. In addition to promoting collaboration between projects to accelerate impact, a funding program for selected projects will continue until a viable product is achieved[14].

Under the GC-Brazil, the research projects selected were co-funded by DECIT/MS and the BMGF in a 1:1 ratio. Themes were mutually agreed upon according to the priorities established by the BMGF and DECIT/MS, following the Brazilian national health research priorities agenda or due to emerging health issues. Public calls were facilitated by the CNPq. All three entities were involved throughout the proposal analysis, funding, and monitoring of selected research projects[13].

Studies on research funding provided by the Department of Science and Technology have been carried out in recent years[6-9,15-17],

but without specifically addressing the international partnerships entered by DECIT/MS. Thus, this article seeks to understand how research funding occurred in the first decade (2011 to 2020) of the DECIT/MS and BMGF partnership, via the GC-Brazil strategy.

Methodology

Study context

The 1988 Federal Constitution stipulates that the SUS has the authority to promote scientific and technological development[18]. Thus, DECIT was created within the MS in 2000 to coordinate a set of health research and development initiatives, collaborating intersectorally to promote efficient allocation of federal government resources to public health needs and strengthen the SUS[19].

Understanding 'fostering' as synonymous with promoting development, stimulating, and enabling[20], DECIT/MS funds health research through four modalities[7,9,16,21–23]:

I. National Funding: launching national, thematic, or multithematic public calls with opportunities for national researchers to participate[7,9,16].

II. Decentralized Funding: also called the Research Program for SUS (PPSUS), where each Federal Unit (FU), in partnership with the MS, CNPq, and Research Support Foundations, periodically launches public calls in thematic areas according to each FU's specific needs, and exclusively for local research institutions[21].

III. Direct Research Contracting: for strategic or emergency MS demands, without public calls[7,9,16].

IV. Tax Incentives: research funding from tax incentives through three programs: the Institutional Development Support Program of SUS (PROADI-SUS), the National Support Program for Oncological Care (PRONON), and the National Support Program for the Health Care of People with Disabilities (PRONAS/PCD)[22,23].

Under GC-Brazil, research was funded through National Funding and Direct Contracting.

Study design

To analyze the funding of research contracted under GC-Brazil from 2011 to 2020, an observational, descriptive, retrospective study was conducted with a quantitative approach, using secondary data obtained from the Pesquisa Saúde platform[24], an open-access online repository that contains research funded by DECIT/MS. The period analyzed was selected for the following reasons: a) it includes the beginning of the bilateral partnership, since 2011 was the year the Memorandum of Understanding was signed between the MS and BMGF; b) it includes research completed by the data extraction date from Pesquisa Saúde.

The search in Pesquisa Saúde[24] was conducted in December 2023, using the keywords: "Bill and Melinda Gates Foundation", "Grand Challenges", and "*Wolbachia*". Data were extracted, tabulated, and processed in a Microsoft Excel® spreadsheet.

To supplement information missing from Pesquisa Saúde, document analysis was performed using DECIT internal documents (meeting minutes, funding spreadsheets, management reports, Decentralized Execution Terms, and technical notes) and documents available in the Electronic Information System (SEI), a document and electronic process management tool. Additional data on receiving institutions, principal investigator, project title, objective, and funding amounts for the 2019 and 2020 calls were obtained. Moreover, discrepancies between document analysis and the information registered in Pesquisa

Saúde[24] resulted in corrections to the research investment amounts. In these cases, amounts recorded in SEI documents were considered for this analysis.

Classification according to institution type by cross-referencing the nature of the institution's National Registry of Legal Entities (CNPJ) and its activity code according to the National Classification of Economic Activities (CNAE), both verified using information available on the government Transparency website[25]. Institutions were categorized as private or public. Public institutions were further classified as municipal, state or federal administrative entity, state or federal educational institution, and state or federal public foundation (see supplementary material).

Classification according to type of research was conducted based on the criteria of the Canadian Academy of Health Sciences (CAHS), as follows: i) biomedical research (BR), investigating health and disease mechanisms, diagnostic, treatment, and prevention methods; ii) clinical research (CR), involving human interventions aimed at improving disease diagnosis and treatment; iii) population and public health research (PPHR), studying population health determinants and applying this knowledge to control relevant health problems; and iv) health services research (HSR), evaluating the health system or services in terms of organization, funding, access, and healthcare costs[26]. For this classification, study titles, objectives, and abstracts were read and analyzed in pairs, with disagreements resolved by consensus.

Data analysis

Among the available variables, the following were analyzed: a) number of studies and funds invested per call and direct contract, per year; b) number of studies per year, per FU and region; c) type of institution funded; and d) type of research.

With a view to mapping studies by FU per public call, a heatmap was created using the Geographic Information System (QGIS) tool, containing publicly available online layers (shapes) of the world and Brazilian FUs, such as the BR_UF_2022 layer provided by the Brazilian Institute of Geography and Statistics (IBGE). Classes were created for categorization based on natural groupings of plotted data, also known as 'natural breaks'.

The research funding amounts were adjusted using the IBGE Brazilian Consumer Price Index (IPCA) to account for inflation, with December 2022 as the reference month. These values were then converted to Purchasing Power Parity (PPP$), using 2022 as the reference year, with 1 USD = 2.58 BRL. PPP$ is a World Bank metric used for international comparisons, acting as an alternative to the dollar exchange rate[27].

Quantitative results followed descriptive statistics methods according to their respective assumptions. Absolute and relative frequencies were calculated for all variables, and data were presented in tables, graphs and figures.

Results

During the first decade of the strategy, from 2011 to 2020, a total investment of PPP$ 48.61 million was allocated to 75 studies, as presented in *table 1*. Six public calls were held within the GC-Brazil context[28-33], addressing the following areas: prematurity (2013), child health (2014), data science applied to mother-child and women's health (2018 and 2020), antimicrobial resistance (2018), and malaria (2019). Additionally, the project 'Eliminate Dengue: Brazil Challenge' was co-funded through direct contracting.

Through six public calls, 71 studies were funded, totaling PPP$ 26.66 million from 2013 to 2020, with interruptions in public call investments between 2015 and 2017. Two types of funding were defined for these calls: a) Full funding, which requires substantial

preliminary data and aims to promote opportunities to develop, refine, and rigorously test combinations of activities that previously demonstrated potential success in a controlled or limited setting; and b) Basic or 'seed' funding, to provide opportunities to test bold ideas with low funding.

The average number of studies funded was 11.83 (± 1.07) per call, with an average value of PPP$ 0.38 million (± PPP$ 0.20 million) per research project. The largest investments occurred in the 2014 and 2019 calls, with research funding as high as USD 1 million, as specified in the calls, characterizing them as full funding. By contrast, the Grand Challenges Exploration (GCE) calls in 2018 and 2020 had the lowest investments, with maximum research costs of USD 100,000 per study, as established in the calls, and classified as basic or seed funding.

Approximately half of the total amount invested in the GC-Brazil strategy was allocated to the 'Eliminate Dengue: Brazil Challenge' project (45.16%), consisting of four studies contracted in 2011 (total value of PPP$ 3.72 million, with additional funding of PPP$ 0.77 million in 2011; PPP$ 0.27 million in 2012; PPP$ 0.53 million in 2013; PPP$ 1.64 million in 2014; and PPP$ 0.51 million in 2015 – see supplementary material), 2016 (PPP$ 6.32 million), 2018 (PPP$ 0.81 million), and 2019 (PPP$ 11.10 million). It is important to note that financial contributions in 2018 and 2019 were made by DECIT and the Ministry of Health's Health Surveillance Department to assess the expansion of the *Wolbachia* method in a municipality with over 500,000 inhabitants in Rio de Janeiro state, and subsequently evaluate the establishment of *Wolbachia*-infected *Aedes aegypti* mosquitoes and their impact in different epidemiological scenarios in three municipalities in Brazil: Campo Grande (Mato Grosso do Sul state), Petrolina (Pernambuco state), and Belo Horizonte (Minas Gerais state), considering regional differences within Brazil.

Table 1. Amounts invested per public call and direct contract under the Grand Challenges Brazil strategy. Brazil, 2011 to 2020

Year	Type of funding	Number of studies	Amount (PPP$) (in million)	% invested
	Public calls	**71**	**26.66**	**54.84**
2013	Call No. 05/2013 – Grand Challenges Brazil: Prevention and management of preterm births	12	5.58	11.48
2014	Call No. 47/2014 – Grand Challenges Brazil: All Children Thriving	11	7.56	15.56
2018	Call No. 08/2018 – Grand Challenges Exploration –Brazil: New Approaches to Characterize the Global Burden of Antimicrobial Resistance	11	2.13	4.38
2018	Call (no number)/2018 – Grand Challenges Exploation-Brazil: Data Science to Improve Maternal and Child Health in Brazil	14	2.92	6.01
2019	Call No. 23/2019 – Research on prevention, detection and control of Malaria	11	6.20	12.75
2020	Call no. 31/2020 – Grand Challenges Exploration – Brazil: Data Science to Improve Maternal and Child Health, Women's Health and Children's Health in Brazil	12	2.26	4.66

Table 1. Amounts invested per public call and direct contract under the Grand Challenges Brazil strategy. Brazil, 2011 to 2020

Year	Type of funding	Number of studies	Amount (PPP$) (in million)	% invested
	Direct contracting – Eliminate Dengue: Brazil challenge	**4**	**21.95**	**45.16**
2011	Using *Wolbachia* bacteria to block dengue fever in Aedes aegypti mosquitos	1	3.72	7.64
2016	Expanding the 'Eliminate Dengue: Brazil challenge': using mosquitos infected with *Wolbachia* in a pilot study in a Brazilian municipality with more than 500,000 inhabitants	1	6.32	13.01
2018	Expanding the 'Eliminate Dengue: Brazil challenge': Using mosquitos infected with *Wolbachia* – Final Phase Niterói/RJ	1	0.81	1.67
2019	Implementing and establishing *Aedes aegypti* mosquitos with *Wolbachia* to reduce arbovirus transmission	1	11.10	22.83
	Total of the GC-Brazil Strategy	75	48.61	100.00

Source: Prepared by the authors, based on data obtained from the Pesquisa Saúde repository[24], accessed in December 2023.

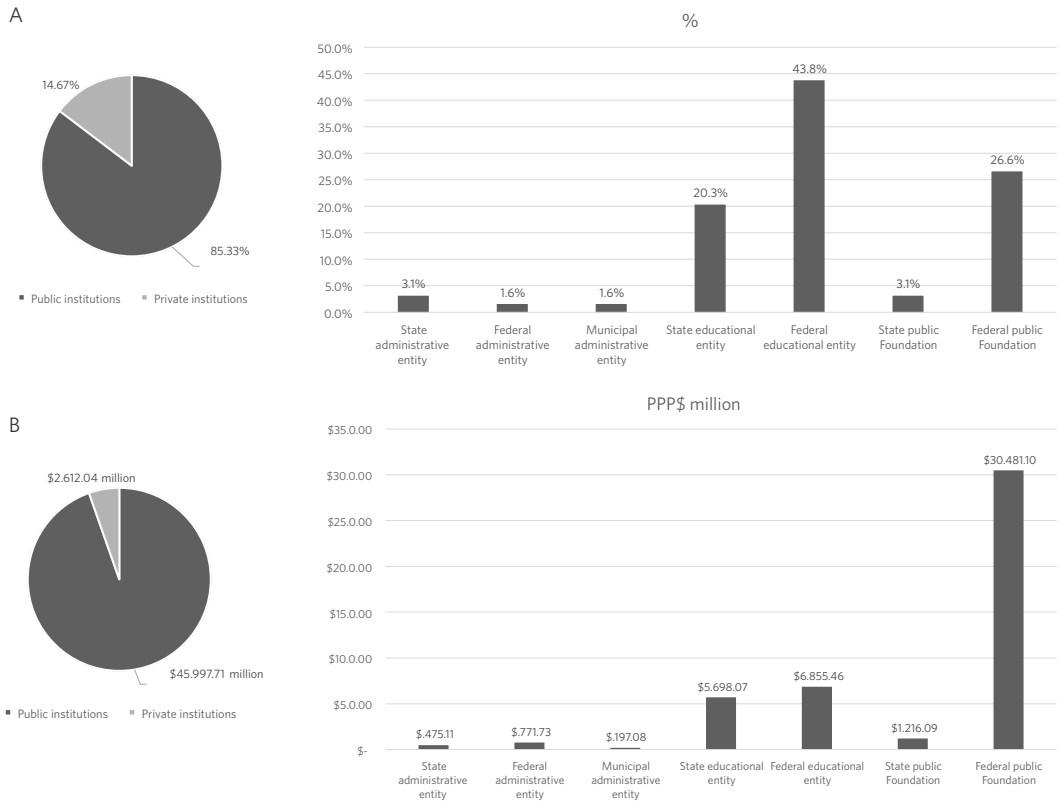
PPP$ – Purchasing Power Parity.

Under GC-Brazil, 33 institutions were awarded research funding over the ten-year period analyzed. Examining the distribution of research by institution type, the *graph 1 A* reveals that 10 private and 23 public institutions received funding for 11 (14.67%) and 23 (85.33%) studies, respectively. These public entities include Science and Technology Institutions (STIs), encompassing public universities and federal research foundations, as well as administrative entities at the federal (Evandro Chagas Institute), state (State Health Department), and municipal (Municipal Health Department) levels. For this analysis, an STI is defined as a direct or indirect public administration agency or entity, or a private non-profit entity, legally constituted under Brazilian law, headquartered in Brazil, whose institutional mission or social objective includes basic or applied scientific or technological research, or the development of new products, services, or processes. All private institutions are classified as STIs.

Among public institutions, federal educational entities had the highest approval rate for research projects (43.8%), followed by federal public foundations (26.6%), represented by the Oswaldo Cruz Foundation (FIOCRUZ), a science, technology, and innovation institution linked to the Ministry of Health.

Public institutions received most of the funding, totaling PPP$ 46 million, compared to PPP$ 2.61 million for private institutions. Among public institutions, federal public foundations were the most funded, receiving PPP$ 30.48 million as shown in *graph 1 B*, PPP$ 21.95 million of which was invested in the 'Eliminate Dengue: Brazil Challenge' project, followed by federal and state educational entities with a total of PPP$ 7.16 and PPP$ 5.70 million, respectively. Administrative entities received the least funding, with only four approved studies.

Graph 1. Distribution of research by institution type in the Grand Challenges Brazil Strategy from 2011 to 2020. (A) By percentage of funded studies. (B) By amount of funding (PPP$)



Source: Own elaboration based on data obtained from the Pesquisa Saúde repository[24].
Values in PPP$ – Purchasing Power Parity.

Analysis of the types of funded research (*table 2*) revealed that most of these studies can be classified as population and public health research (PPHR), representing 40.00% of the total research and accounting for the largest share of investment, totaling 55.53% (PPP$ 26.99 million). It is important to note that PPP$ 18.24 million (67.60%) of this amount refers to direct contracts for the three studies aimed at expanding and implementing the 'Eliminate Dengue: Brazil Challenge' in 2016, 2018, and 2019.

In second place is health services research (HSR), which represent 22.67% of the total, followed by biomedical research (BR), with 21.33%, receiving investments of PPP$ 7.24 million and PPP$ 8.57 million, respectively. Finally, clinical research (CR) constituted 16.00% of the total, absorbing 11.96% of the total invested resources.

Table 2. Distribution of funding for Grand Challenges Brazil studies by type of research. Brazil, 2011–2020

	No. of studies		Funding	
Type of research*	**n**	**%**	**PPP$ (in million)**	**%**
Population and public health	30	40.00	26.99	55.53
Health services	17	22.67	7.24	14.89
Biomedical research	16	21.33	8.57	17.63
Clinical research	12	16.00	5.81	11.95
Total	75	100.00	48.61	100.00

Source: Prepared by the authors, based on data obtained from the Pesquisa Saúde repository[24], accessed in December 2023, supplemented with DECIT documents.

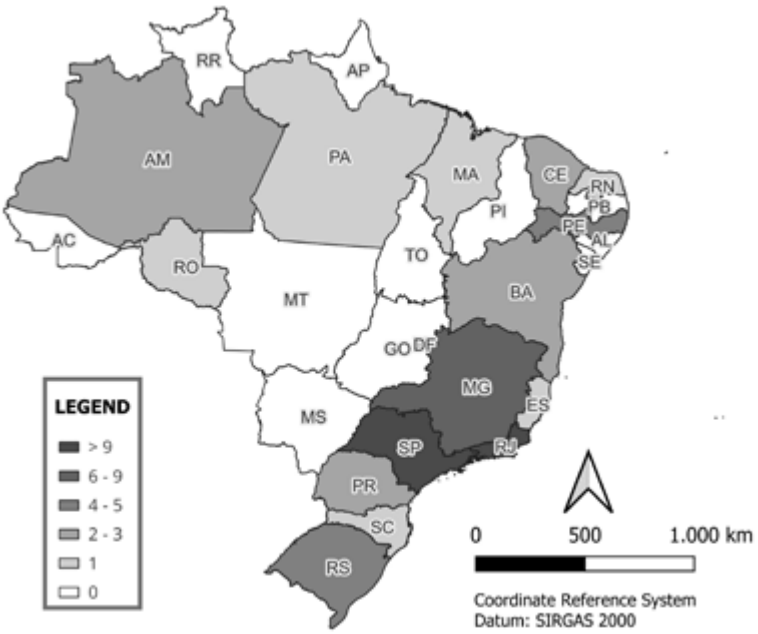
*Classification according to CAHS, 2009; PPP$ - Purchasing Power Parity.

With respect to the geographical distribution, the georeferencing analysis of approved research under GC-Brazil in *figure 1* reveals a concentration of institutions located in Southeastern Brazil. In this region, all states were included, with São Paulo and Rio de Janeiro standing out, with 21 and 18 studies, respectively. Minas Gerais state had 9 studies approved, while Espírito Santo had only 1.

Southern Brazil had the second-highest number of funded projects, with a total of 8, representing 11.26% of approved research. All states in this region were included: Paraná (3 projects), Rio Grande do Sul (5 projects), and Santa Catarina (1 project). By contrast, the Central-West showed the lowest number of approved projects among the country's regions, with only 2, all allocated to the Federal District, representing 2.82% of the total.

The Northeast and North had an intermediate number of approved projects. The Northeast received funding for 11 studies, totaling 15.49% of approvals, distributed across 5 states: Bahia (2 projects), Ceará (3 projects), Maranhão (1 project), Pernambuco (4 projects), and Rio Grande do Norte (1 project). On the other hand, the North had 4 projects, corresponding to 5.63% of the total, with the following distribution: Amazonas (2 projects), Pará (1 project), and Rondônia (1 project).

Figure 1. Distribution of funded research in the public calls of the Grand Challenges Brazil Strategy by Federal Unit. Brazil, 2013-2020



Source: Own elaboration based on data obtained from the Pesquisa Saúde repository[24].

North Region: Acre (AC), Amazonas (AM), Amapá (AP), Pará (PA), Rondônia (RO), Roraima (RR), Tocantins (TO); Northeast: Maranhão (MA), Piauí (PI), Ceará (CE), Rio Grande do Norte (RN), Paraíba (PB), Pernambuco (PE), Alagoas (AL), Sergipe (SE), Bahia (BA); Central-West: Mato Grosso do Sul (MS), Mato Grosso (MT), Goiás (GO), Federal District (DF); Southeast: Minas Gerais (MG), Espírito Santo (ES), Rio de Janeiro (RJ), São Paulo (SP); South Region: Paraná (PR), Santa Catarina (SC), Rio Grande do Sul (RS).

Discussion

Between 2011 and 2020, the Ministry of Health's Department of Science and Technology and the Bill & Melinda Gates Foundation allocated PPP$ 48.61 million to 75 research projects. There was a predominance of population or public health studies, which were approximately 1.8 times more frequent than biomedical and health services research, and 2.5 times more common than clinical studies. This result reflected the thematic focus of the public calls, which aimed to address population-level health issues.

It is important to note that for DECIT, research support is not limited to funding studies; it also includes establishing priorities, as well as the appropriation and dissemination of the results achieved[6]. Research priority agendas guide what should be funded in the country. The first agenda was published in 2004 (National Health Research Priorities Agenda – ANPPS), following the 2nd National Conference on Health Science and Technology[34]. More recently, in 2018, the Ministry of Health updated these priorities and published the Ministry of Health Research Priority Agenda (APPMS)[35]. Thus, themes such as child health, including the perinatal period, first year of life, and childhood, as well

as the magnitude, dynamics, and understanding of women's health issues, are priorities in both agendas. Likewise, malaria and microbial resistance to antimicrobials and other drugs are also included in both ANPPS and APPMS[34,35]. As such, the studies funded by GC-Brazil were in line with the country's research priorities over this decade, allowing the knowledge generated to contribute to public health policies.

In light of limited resources, governments, funding agencies, and research organizations worldwide increasingly strive to maximize the social and economic returns of research investment to improve health practices[36,37]. This was also observed in the GC-Brazil strategy, which sought research projects applicable to the local context. The calls for public proposals clearly emphasized new public health approaches with impactful actions on a regional scale. Given the characteristics of public calls in this international collaboration, selected studies needed to investigate both the health determinants of a population and the application of this knowledge to control relevant health problems.

A significant investment, representing almost half of the resources allocated by GC-Brazil, went to the 'Eliminate Dengue: Brazil Challenge' project, covering all assessment stages of the *Wolbachia* method for the Brazilian context, from translational research encompassing various stages of laboratory work to population benefits[38]. Funding for this project began in 2004 through the Grand Challenges in Global Health program[39]. In 2011, with the Memorandum of Understanding that formalized GC-Brazil, the project was initiated in Brazil, with initial co-funding by DECIT and BMGF[24], in partnership with Monash University in Australia, where research on the bacterium's use in *Aedes aegypti* mosquitoes began.

Arboviruses pose an important public health threat in Brazil, which has reported the highest proportion of suspected cases in the Americas[40]. Recently, from 2019 to 2023, 6,104,992 suspected cases of dengue were recorded in Brazil, with 63% (2020) to 84% (2022) of cases reported in the Americas[40]. Thus, with the good results of the *Wolbachia* strategy in Brazil, achieving a significant reduction in the transmission of dengue and other diseases transmitted by *Aedes*[41-43], and its proven effectiveness in reducing dengue incidence and severity[44], the 'Eliminate Dengue: Brazil Challenge' project, funded through direct contracting, was deemed strategic for reducing arbovirus transmission[16,39,43].

Despite the participation of researchers and institutions from all Brazilian regions, the GC-Brazil program observed a concentration of approved research in the Southeast, which accounted for 81.25% of the total invested resources divided among 45 research projects. This predominance of investments in researchers from Southeastern Brazil has been frequent, regardless of the research theme[9,16,17]. According to a study conducted on the InCites platform, between 2011 and 2018, Brazilian states with the highest research funding were São Paulo (34%), Rio de Janeiro (12%), and Minas Gerais (10%), followed by the three states in the South[45]. A study that assessed dengue research funding in the country showed that institutions in the Southeast received approximately 78% of DECIT's funding[17]. A similar situation was reported in relation to funding for food and nutrition research[9].

Changing this scenario is not simple, given the concentration of educational and research institutions in southeastern Brazil. A successful approach to promote scientific and technological advancements in health for all Brazilian regions is the Shared Health Management model of the Research Program of the National Health System (PPSUS)[21]. With a decentralized, participative management model and considering the principle of equity, one of SUS's core principles, PPSUS aims to fund research on priority health themes for each state, thereby helping reduce regional disparities in health science, technology, and innovation[17,21].

Another strategy adopted by DECIT to foster scientific progress in all Brazilian regions is funding multicenter studies involving research centers from several states, facilitating knowledge sharing and research expertise.

Finally, most of the receiving institutions were public entities (69.70%), but 30.30% were private. Among the public institutions, educational entities (federal and state universities) and federal public foundations stood out. In Brazil, as in developed countries such as the United States, the main research funder is the government, either directly through ministries or via national or state funding agencies, as well as public universities, which have funds to support research and technological innovation by faculty and students[6,45]. Thus, it is expected that STIs would predominantly benefit from public research funding. However, unlike public calls through the CNPq, in which researchers generally must belong to an STI, GC-Brazil approved projects from researchers affiliated with federal, municipal, and state administrative entities. The participation of administrative entities was possible because the public calls did not prohibit researchers from being affiliated with an STI[28-33].

As a limitation, this study analyzed only the research funding provided by DECIT in partnership with the BMGF under GC-Brazil, that is, research funded directly by the BMGF to other institutions in the country was not included. Another limitation is that the present study was based on information from the Pesquisa Saúde repository[24], which may contain input errors that were corrected, where possible, through document analysis.

Conclusions

This study reveals that, through the Grand Challenges Brazil strategy, a partnership between the Ministry of Health and the Bill & Melinda Gates Foundation, PPP$ 48.61 million was invested in 75 studies aligned with the country's research priorities over the ten-year period analyzed. There was a predominant emphasis on population and public health studies, as well as health services research.

International partnerships have the potential to significantly increase the amount of funding available to researchers in the country. However, further studies are needed to assess how the knowledge produced by these research projects has been used by decision-makers and the real impact of these studies on health policies.

Acknowledgments

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Conflict of interest statement

All authors held technical or managerial positions at the Brazilian Ministry of Health at different times.

Collaborators

Couto PC (0000-0002-9253-2017)*, Py-Daniel SS (0000-0002-1081-0483)* and Melo GBT (0000-0002-6758-0834)* contributed to the study's conception and design, data collection, analysis and interpretation, drafting and final revision of the manuscript. Obara MT (0000-0001-6872-0096)* and Angulo-Tuesta A (0000-0002-3231-5918)* contributed to the study's conception and design, critical review, and approval of the final version of the manuscript. ■

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ERRATA

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In the manuscript 'Grand Challenges Brazil: One decade of health research funding'.
Saúde Debate V. 49, N. 145, e10034, abr-jun 2025,
Saúde em Debate corrects:

On page 6, where it read:

[...] Examining the distribution of research by institution type, the graph 1 A reveals that 10 private and 23 public institutions received funding for 11 (14.67%) and 23 (85.33%) studies, respectively. [...]

It should read:

[...] Examining the distribution of research by institution type, the graph 1 A reveals that 10 private and 23 public institutions received funding for 11 (14.67%) and 64 (85.33%) studies, respectively. [...]

HTTPS://DOI.ORG/10.1590/2358-2898202514510034I-ERR

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