

Health is on the topmost list of priorities of any modern society and is seen as a determinant, and not only as a result, of economic and social development. It is also one of the top priorities of international economic agencies like the World Bank. In many industrialized nations, health research is managed by dedicated institutions, like the National Institutes of Health in the United States or the Conseil National de la Recherche en Santé in France.

Health should not compete with other scientific disciplines for a piece of the research funding pie. A modern health system, particularly a universal one like that of Brazil, a country fighting to cross the bridge from a low-income to a high-income economy, thrives on research, as science-based guidelines are crucial to achieve the goals of truly universal access to the benefits of a health system, as well as eradicating poverty-associated disease.

Reaching a consensus on a research agenda is an important milestone, but this will only become a turning point if the Ministry of Health does its homework.

Research in many areas of health is not an easy matter. Publication and grants is what makes the academic world tick. For that matter, basic laboratory-based research is much more effective, as it yields a more abundant and glorified amount of papers, and usually in less time. Thus, the current *modus operandi* of most funding agencies and universities, nationally and worldwide, is biased towards this aspect of research, perpetuating the process.

A crucial role for the Ministry of Health is thus to make other less glamorous areas, like clinical and operational research, equally attractive to researchers, who must be assured of continuous support, not only for a short project, but to be able dedicate their careers to much needed areas of research. The Ministry of Health must instill confidence in the research community, attracting the most brilliant and promising of the young researchers.

The road map has been drawn, to a great extent by the effort of Guimarães et al. and a large contingent of anonymous supporters. Now is the time to pave and signal the roads, clearly indicating where they should lead, and assuring that the journey, albeit long and arduous, will be safe, productive, and – why not? – pleasurable.

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We wish to discuss two points raised in the author's paper: (a) Brazilian scientists have extensive experience, expertise in medical and biomedical research, and certainly research results that may be applicable to the Unified National Health System (Sistema Único de Saúde – SUS). Is the Ministry of Health using this academic knowledge, developed by scientists in public universities and institutes and sponsored by the Brazilian National Research Council (Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPq) and other research support agencies to improve SUS medical care? (b) Since 2003 the Ministry of Health has been playing a central role in structuring national efforts in health research, and is it possible to evaluate the impact of its efforts only two years later? What has changed since then?

Traditionally, Brazilian academic research results have not been used in national government policies. To illustrate this point, it is worthwhile to remember the case of the Integrated Program for Endemic Diseases (Programa Integrado de Doenças Endêmicas – PIDE) created and supported by the CNPq and linked to the Ministry of Science and Technology in the 1970s. Most of the research reports submitted by scientists to National Research Council failed to reach or were not analyzed and discussed by the Ministry of Health. Nevertheless, PIDE must be considered a successful program, by significantly increasing the number of scientists and research projects in endemic parasitic diseases such as Chagas disease, leishmaniasis, schistosomiasis, and malaria.

Another historical example can be cited: in 1949 José Pellegrino and Emmanuel Dias sent a telegram to the Minister of Health, Mário Pinotti, stating very effusively that it was possible to control Chagas disease by spraying houses with pesticide. No sooner than 30 years later, the Ministry of Health launched a national Chagas disease control program, which proved to be a complete success after 10 years of continuous work.

When the National Program for Schistosomiasis Control (Programa Especial de Controle da Esquistossomose – PECE) of the Ministry of Health began in 1975, most of the scientists working in the field, even though recognized nationally and internationally as experts, were not called on for advice, and when these scientists made suggestions and recommendations, they were not taken into consideration.

Nevertheless, the experience acquired by Brazil in the last three decades shows that the diagnosis and treatment of schistosomiasis can

and must be incorporated into the National Health System.

The tools are simple, cheap, and were developed by Brazilian scientists. Results of field studies made in different States have clearly shown that disease control is possible through repeated clinical treatment. This incorporation transforms the vertical centralized Ministry of Health control campaign into horizontal and decentralized action to be conducted by the Municipalities and States. However, for transmission control, sanitation and health education must be incorporated into the action, and unfortunately the Federal Government is repeatedly neglecting such matters. It must be pointed out that an entire century has passed since *Schistosoma mansoni* was first described and identified in Brazil by Pirajá da Silva.

In the late 1980s, the political behavior of the Ministry of Health changed, and fortunately in recent years the relationship between scientists and sanitarians is quite good, with a highly productive exchange of opinions and knowledge. Fortunately the antagonism in Brazil between these two groups of professionals is now over, after decades of misunderstanding.

For three years now, the Brazilian Ministry of Health has been playing a role in structuring national health research efforts. What has changed since then? First, it is worth mentioning the success of the 2nd National Conference on Science, Technology, and Innovation in Health, in both its preparatory phase and results. Broad participation at various levels was a challenge (as the authors pointed out) for scientists and community leaders to interact like they never had before. It was difficult to find a common language in order to discuss, in depth and openly, their frequently conflicting points of view. As in the national phase, the most controversial point in Minas Gerais was the Ministry of Health proposal to create a health research support agency. Several arguments were applied to convince community leaders that the resources to support research projects would not be withdrawn from public basic health care. The Brazilian State Company for Agricultural Research (Empresa Brasileira de Pesquisa Agropecuária – EMBRAPA), transferring research results from the laboratories straight into the field and bringing widespread benefits, provided a positive example, as did models from other countries that have successfully centralized resources for health research, as in the United States, Canada, and France.

The impact of the Ministry of Health Project “Research for the National Health System” in the State of Minas Gerais can be measured

primarily through changes in relations and attitudes: (a) the improvement of the relationship between scientists and health care policymakers regarding the possible use of patient data; (b) the interaction between the Minas Gerais State Secretariat of Health and Minas Gerais State Research Foundation (Fundação de Amparo à Pesquisa do Estado de Minas Gerais – FAPEMIG) and the subsequent relationship that was established; (c) the knowledge and acceptance, by health care policymakers, of the scientific community’s values and practices like peer review and independent approval of research projects; and (d) more commitment by academic scientists to public health policy. This fact is evidenced by the number of proposals researchers succeeded in getting approved in the second call launched jointly by the Ministry of Health and FAPEMIG in 2004, as compared to the previous call in 2003. In response to the first call, scientists had 24% of their proposals approved. Some of the projects were refused, although presenting scientific merit evaluated by peer review, because they were not relevant to the SUS. During the second call, in 2004, 42.2% of the proposals were approved.

The monthly meetings of the Nucleus of Science and Technology in Health, implemented within the scope of the Ministry of Health project with the initial aim of discussing research topics for the calls for proposals, became an excellent opportunity for interaction between professionals from the State health system, health managers, and scientists. Discussions on such topics as bioethics and transgenics, intellectual property, information, and data dissemination enriched the participants’ universe.

By working together with the various State Research Foundations in Brazil, the Ministry of Health has helped strengthen them in various ways. Besides the fact that State governments are required to match the funds provided by the Ministry of Health, some FAPs with previous experience in calls for research projects learned how to conduct them with the assistance and active participation of Ministry of Health staff. For these agencies, it was an important experience with an objective system for selecting research proposals. FAPEMIG was created in 1986 and had selection and evaluation processes already consolidated, according to the scientific community’s values and practices, but it has been fighting for resources since the very beginning. By launching joint calls for research projects with the Ministry of Health, it not only guaranteed Federal resources, but also State government funds for health research. The re-

sult was double the amount of funding in the second call for projects as compared to the first.

The efforts by Guimarães et al. started a large process in order to involve the Ministry of Health as the principal health research player in Brazil. We congratulate them for the success and also thank them for the opportunity to share in the project's implementation in Minas Gerais. It has been a very enriching experience for everybody involved in the project. We hope that the Ministry of Health will accept the remaining challenge, making this initiative permanent and sustainable.

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This is a highly important paper which describes in detail Brazil's experience with health research prioritization for policy development. The article provides relevant information for both the process and content of the discussions. I think it is important to publish this paper in order for other organizations and developing countries to learn from Brazil's experience, perhaps one of the most advanced and better funded in this field.

However, the paper requires a more comprehensive discussion and clarifications on various points, as follows: (1) the close relationship with the Unified National Health System (Sistema Único de Saúde – SUS) is extremely important and reflects the fact that this process is not only academic, but has important practical implications. The most difficult task for readers is to understand the complex institutional arrangements in the government, and this is described in the section on the “context of the Brazilian health system” and that of the research. Therefore, it would be very useful to expand the discussion with a reflection on key elements in the process that could be transferred to another countries or systems. For example, the paper does not enter extensively into the issue of creating research capacity, which is a very important and often neglected issue in other developing countries. This is important given that Brazil has been building and investing in capacity to reach this point for several decades and is well ahead of other countries in Latin America; (2) the process of selection of the 510 researchers and policymakers is key to the results. One would like to see more information on both the selection and rejection

criteria. For example, how do we define the “community” in community participation? How did this take shape with the electronic website discussion? What is the “community at large”, as it would be interesting to know which type of people have access to these discussions. Whom did we leave out in this process? Discussion on this would be useful; (3) “equity” is a key element pursued by the policy. It would be good to define it, as all the outputs will refer to it. A better definition will help the subsequent monitoring and evaluation of policy impact. Which indicators will be used to measure progress in due course; (4) reference to inputs by 510 people (discuss the fact that 408 professionals took part in the process, and that previously 102 had taken part in only two topics, dengue and violence; this does not make the investment by the latter similar to the investment by the 408); (5) discuss the reasons and implications of the decision that “*there were some investments to support research projects on pressing issues (...)* [such as] *National Research Task-force on Dengue Fever and nine projects for the Brazilian Tuberculosis Network*”. While I do understand that these are diseases with important implications in terms of disease burden, and that there is a government policy to address these, it is not clear at which level, and where in the process, the decision was made to focus on these specific diseases. Neither is it clear from the paper why these were identified rather than other key diseases or determinants. Some discussion on this point would be very useful; and (6) “*Another large program, called Operational Research for SUS*” does not completely explain how that “other program” fits into the strategy. It looks as if it was added to the paper and should have been described earlier.