## The strategic role of Fiocruz in the context of Brazil's National Policy for Science, Technology, and Innovation in Health

Health is both an essential dimension of conditions for citizenship and a central part of an extremely limited set of production and innovation systems that define the future possibilities for countries to achieve development and overcome the heavy inequalities characterizing the global context. In contemporary world history, only countries that have succeeded in establishing endogenous innovation bases have managed to overcome the barriers of backwardness and position themselves as sovereign nations to set the course for their own development.

The area of science, technology, and innovation in health shows a deep and growing asymmetry in the generation of health knowledge. Of the total world research and development effort in health, 96% of expenditures are concentrated in the developed nations, with only 4% in medium and low-income countries like Brazil. The health goods and services industry accounts for the majority of these R&D activities in the developed countries, following a logic that is invariably disconnected from social needs and national health innovation systems in countries like Brazil.

The utilization of health research conducted inside Brazil is extremely weak, raising a huge challenge for transforming our productive sector in order for it to become significantly involved in high-intensity activities in terms of knowledge and innovation, meanwhile linked to the country's social needs. We have just witnessed the strong dynamism of Brazil's scientific output, with a 56% increase from 2007 to 2008 and the country moving from 15<sup>th</sup> to 13<sup>th</sup> place in the international ranking of scientific articles. This science output represents 2.12% of world production (http://www.sciencewatch.com), or nearly double Brazil's proportional share of the global GDP, with health as one of the country's principal research areas. Brazil's main dilemma is that it has qualified researchers and a consolidated science and technology base in health, in addition to a broad and diversified base for the production of goods and services in health (unparalleled in Latin America), but relatively little productive advantage is taken of the knowledge generated thereby in order to meet the population's needs.

In dealing with this situation, the country also has a state structure that was weakened by the prevailing view during the neo-liberal period. Innovation and development cannot exist without breaking the shackles of a backward structure. Innovation requires an innovative state, and we are offering Fiocruz to society as an advanced field for experimentation with new forms of state action, as an institution that is both democratic, flexible, networked, and devoted to transformation.

In this context, Fiocruz submits its proposal to Brazilian society to serve as a strategic state institution that follows the example set by Oswaldo Cruz in order to allow harmonizing Brazilian health science with the Brazilian population's needs and establishing an endogenous base for innovation. Fiocruz thus embraces its mission as anchor in the national health development process, in partnership with other Brazilian institutions, helping form a technical, scientific, productive, and political network at the national and international levels.

The ultimate goal of a strategy for science, technology, and innovation in health is to contribute to the objectives of Health Reform in Brazil. The challenge is huge and requires profound changes in the relationship between research, innovation, and production, but we are confident that the current context presents an opportunity for Brazil's inclusion in a new development standard that combines competitiveness, innovation, equity, and the guarantee of the population's universal access to strategic goods, services, and knowledge in health.

Paulo Gadelha President, Fundação Oswaldo Cruz.