

The response of science to the COVID-19 pandemic: commitment to life

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Addressing the COVID-19 pandemic has challenged science to come up with rapid responses based on the best available evidence, in order to guide actions and policies as adversities imposed themselves. Non-pharmaceutical measures – above all social distancing and use of face masks – have been responsible for saving thousands of lives and avoiding suffering caused by the disease all over the world. These collective measures that require intersectoral actions, organized and disseminated to work and contain the disease in real settings.¹

The hypothesis of addressing diseases through specific therapies, with emphasis on drugs treatments, had proven itself to be inefficacious in the case of COVID-19.² Similarly to other communicable diseases with which humankind has coexisted for many years, such as dengue, prevention is the most effective alternative for controlling transmission and illness. Possibly due to pressure for technologies capable of reducing the relevance of non-pharmaceutical measures, it has been in this area that the greatest weaknesses in scientific research and dissemination have been witnessed, resulting in harm to individuals and to society.²

In less than one year after the beginning of the pandemic, different options of efficacious vaccines have been developed and made available. In the first few weeks of vaccination against COVID-19 in Brazil, it is estimated that the lives of some 14,000 elderly people aged 80 or over were saved, by giving priority to this age group in the immunization strategy adopted by the Brazilian Unified Health System.³ Restricted laboratory production capacity and the high cost of accessing vaccines are limiting the dissemination of their benefits among the greater part of the global population, in addition to delaying the solving of this health crisis.

The intellectual property rights of the vaccines available to date belong to multinational pharmaceutical companies, which acquired these rights at advanced stages of publicly funded research on them, precisely when the results were beginning to appear promising.⁴ Patent protection is proving to be an obstacle, not justified by the claim that profit stimulates pharmaceutical innovation. As seen in other experiences, long-term risk investments were made by governments in the form of constant funding of scientific research, making clear the essential role of the State in scientific and technological development in favor of life.⁵

The origin of the pandemic and preventing new health emergencies are also focused on by science. Predatory exploitation of available resources provokes climate change and an environment propitious to microorganism adaptation and cross-species leapfrogging, as has been seen in the case of SARS-CoV-2. The means used to produce animal and vegetal food, based on monoculture, destruction of biomes, and extensive use of pesticides, for example, have shown themselves to be incompatible with the balance needed to maintain life or, at least, to prevent future pandemics.⁶ We already have agroecology-based technology and knowledge that value the culture of ancestral peoples, respect the limits of nature and distribute wealth without spreading diseases.

The health crisis we are going through has revealed the potential of science to provide solutions to the challenges of preserving life. The painful experience of the COVID-19 pandemic has also shown that implementation

of these responses requires democratization of knowledge and technologies developed through creativity and solidarity between peoples. Likewise, it is the role of science to ensure that this progress can be reached by all people. Illuminating the discussion about how science is produced, how and by which sectors its progress will be enjoyed, is essential for it to be truly used in favor of life.

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