

## Opinion

# The use of the scientific method as dogma can be an obstacle in times of pandemic

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## Opinion

Science is not inherently dogmatic. On the contrary, in our opinion and according to Bachelard, it often breaks with certain dogmas [1]. That is why it must have the necessary flexibility to be able to analyze and incorporate exceptional situations. In this regard, the current Coronavirus pandemic is an exceptional situation causing several thousand deaths a day.

In these circumstances, the scientific community has the responsibility to adapt scientific thought to the exceptional situation. In this sense, the classical methodology used for the approval of vaccines could imply that, due to a suspected case of a possible severe adverse effect among 30,000 volunteers, thousands of patients will continue to die every day for several months until the methodological dogma authorizes to continue with approval and application of phase III vaccines. We believe that scientists have a responsibility to resolve, or at least allow themselves to discuss, this issue. Society is waiting for answers and proposals.

In the application of new treatment strategies, there is the figure -at least for individual cases- of the compassionate use of therapeutic strategies that have scientific reasonableness. This possibility has not been considered for large populations in times of pandemic. Considering vaccine use as a high-need drug -with the evidence provided having passed phase II- is valid. Despite assuming a potential risk, we might be curbing the genocide this disease implies. Several hundred thousand lives might be saved compared with the doubt generated by very few cases, which so far have not even been confirmed as caused by the vaccine.

This other view is consistent with publicly available information and with the perspective of right and wrong

### More Information

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imposed by those who decide following the scientific dogma. They are trying to convince us that the decision to stop research and, in some cases, to continue delaying vaccine use is for the good of all. We do not believe that those who die every day, and the people around them, agree with this position unless there is some additional information that the dogma advocates do not want to release. There was a fantastic job of researchers and pharmaceutical companies developing several vaccines in a truly short period. Now, we must wait from a delay in the authorization of vaccination, at least in the high-risk population [2]. Other similar claims are calling to action [3-6].

We believe that our view deserves, at least, to be seriously discussed. The second wave is among us, and the reported effectiveness of the different vaccines is higher than 90% [7]. It is important to continue with the research while evaluating the possibility to adapt the methodology for prompt vaccine approval due to the exceptional nature of the pandemic. Thus, strict monitoring of adverse reactions in lives saved with vaccines is the necessary control to compare against benefits. This is the method that common sense, absent of dogmas, proposes to use.

We are aware of the dangers of the virus and its lethality; however, we strongly believe that the population should be allowed to use the vaccines in question as soon as possible.



“Primum non nocere” should not be a valid principle only for some potential unconfirmed adverse effects. Maintaining quarantines and the “status quo” is undoubtedly much more harmful. Science must have the courage to change its way of thinking, adapting it to progress, based on the intelligence to understand reality devoid of political or economic commitments.

### Declaration of competing interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this commentary.

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