# The presence of the adjunct ozone therapy in the scientific official literature worldwide should suggest that this medical approach is neither denialism, nor pseudoscience: author's response to Chirumbolo et al.

Heslley Machado Silva

State University of Minas Gerais (UEMG) and University Center of Formiga (UNIFORMG), Brazil

My article published in The Lancet Regional Health-Americas sparked relevant debate around the controversies surrounding the therapeutic use of ozone gas.1 Despite Chirumbolo and colleagues' objections to my argument and the journal's decision to publish my text, I recognise the importance of the considerations put forward and the need to discuss their positions with attention and respect. I believe that my text does not have a political bias, as I am criticizing the release of treatments that are not backed by science in governments of different ideological positions.2 The central issue I addressed is the promotion of ozone therapy treatments by the Brazilian public health system, despite their not being approved by the Brazilian National Health Surveillance Agency (ANVISA). The cautious stance of Brazilian medical organizations as well as the recommendation of the US FDA (Food and Drug Administration) against ozone therapy (including relevant risks)3 corroborate the need for a debate based on scientific evidence. One article cited by Dr Chirumbolo, discussing a possible treatment of multiple sclerosis with ozone states that "Further investigations are required to corroborate ..."4 and describes this gas as "toxic and irritating".5 I would like to thank Chirumbolo and colleagues for correcting the nomenclature of the technique, and emphasizing the importance of

an academic event, as indicated, debating the issue in a scientific manner, and avoiding conspiracy theories. Finally, I would like to thank Chirumbolo and colleagues and the editors of The Lancet Regional Health—Americas for promoting a constructive debate on these complex and controversial issues.

## Contributors

Dr. Heslley Machado Silva participated in all stages of the development of this text.

## Declaration of interests

No conflicts of interest.

#### References

- 1 Silva HM. The ozone therapy controversy and the need for sciencebased health policies in the Brazilian context. *Lancet Reg Heal*. 2024;34.
- 2 Silva HM. Bolsonaro and drugs without scientific evidence: an old relationship. *Aten Primaria*. 2023;55.
- 3 Balan C, Schiopu M, Balasa D, Balan C. Ozone therapy-a rare and avoidable source of infectious pathology of the spine. *Rom Neurosurg*, 2017:281-288.
- 4 Delgado-Roche L, Riera-Romo M, Mesta F, et al. Medical ozone promotes Nrf2 phosphorylation reducing oxidative stress and pro-inflammatory cytokines in multiple sclerosis patients. *Eur J Pharmacol.* 2017;811:148–154.
- 5 Pryor WA, Squadrito GL, Friedman M. The cascade mechanism to explain ozone toxicity: the role of lipid ozonation products. *Free Radic Biol Med.* 1995;19:935–941.



E-mail addresses: heslley@uniformg.edu.br, heslleyms@ufmg.br.





oa

The Lancet Regional Health - Americas

2024;35: 100808

Published Online xxx

https://doi.org/10.

1016/j.lana.2024.

100808

Check fo

Correspondence

<sup>© 2024</sup> The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).