

**Response to: Bibliometric analysis to global research status quo on photobiomodulation (re: doi: 10.1089/photob.2023.0058)**

**Sergey V. Moskvina**

Doctor of Biology, PhD in Technology, Research Center "Matrix", <https://orcid.org/0000-0002-1503-0742>; e-mail: [7652612@mail.ru](mailto:7652612@mail.ru)

I have read this paper with great interest.<sup>1</sup>

However, I must note that the authors were catastrophically mistaken in all their data, which had caused the wrong outcomes.

First, the paper states that the first article on this topic was published only in 1983, even though publications about low-level laser therapy (LLLT) were available since 1965 in Russia; the first monograph systemizing those publications' results was published in 1972, with the number of experimental and clinical works reaching several thousand by 1983.<sup>2</sup>

Second, the present paper doesn't distinguish between laser and incoherent sources of light, which is unacceptable since monochromatic laser light has fundamentally, qualitatively higher efficiency, as reflected in both experimental and clinical research.<sup>3,4</sup>

Third, usage areas are limited, even though LLLT has been utilized in almost every area of modern medicine for the last 50 years.<sup>5,6</sup>

Additionally, there is an obvious tendency that the authors of this article do not pay attention to but that is of great interest. There is a growing number of studies proving the higher effectiveness of laser acupuncture with other obvious advantages of laser acupuncture (non-traumatic, simplicity, shorter procedure time), which, in our opinion, will encourage the majority of specialists to use this method in the near future.<sup>7</sup>

All the research tasks from the paper's conclusion ("1. Research directions: ... 2. Hotspots: ...") were resolved a long time ago, and their results are actively used in almost every medical center in Russia. Moreover, *in vitro* and *in vivo* research is rarely performed due to a lack of necessity since approbated and effective LLLT methods already exist.

Nevertheless, if we consider photobiomodulation (PBM) using only light emitting diodes (LEDs), not lasers, then the authors are right about a small number of extant publications, with Brazil holding the first place and usage areas of this method are rather limited.

## References

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