



Editorial

# Definition of Laser Acupuncture and All Kinds of Photo Acupuncture

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**Abstract:** This editorial contains a general definition of laser acupuncture and all kinds of photo acupuncture accepted by the World Association for photobiomodulation Therapy (WALT).

**Keywords:** laser acupuncture; photo acupuncture; definition; photobiomodulation

The number of studies on laser acupuncture listed in the SCI and PubMed databases is steadily increasing. Altogether, in PubMed, the most important medical database ([www.pubmed.gov](http://www.pubmed.gov)), there are 921 publications on this topic as of 20 October 2018. However, at the moment, there is no common accepted definition of the term laser acupuncture.

On 5 October 2018, the following general definition of laser acupuncture was developed and discussed during a consensus session (Chairman of the session: Prof. Gerhard Litscher) at the 12th International WALT (World Association for photobiomodulation Therapy) Congress in Nice (Figure 1), in France. In this session, the chairman, all invited speakers, and, in addition, 28 experts from around the world agreed. The next day (6 October 2018), among other things, the proposal was presented by the chairman in the context of another consensus session and the entire executive board of WALT (Chair: Prof. Praveen Arany, President of WALT and Co-Chair of the Congress and Prof. Rene-Jean Bensadoun, Co-Chair of the Congress) also approved the proposal. Here is the definition:

### Definition of Laser Acupuncture \*:

*“Photonic stimulation of acupuncture points and areas to initiate therapeutic effects similar to that of needle acupuncture and related therapies together with the benefits of PhotoBioModulation (PBM)”*

\*) and all kinds of Photoacupuncture



**Figure 1.** World Association for photobiomodulation Therapy (W.A.L.T.). 12th International Congress, Nice, France, 3–6 October 2018 (© WALT).

The basics of laser acupuncture are well described in scientific literature [1–4]. In addition, it has also been shown that laser acupuncture and needle acupuncture in healthy participants are able to produce different brain patterns [5]. Laser acupuncture activates the precuneus relevant to mood in the posterior default mode network, while needle acupuncture activates the parietal cortical region associated with the primary motor cortex. Further investigations are warranted to evaluate the clinical relevance of these effects [5].

It is also appropriate to indicate here that WALT guidelines will be coming out shortly (Summer 2019) on the current state of knowledge with primarily human treatment studies specifically, but also evidence from lab studies.

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## References

1. Litscher, G.; Litscher, D. Scientific Aspects of Innovative Laser Medicine. In *Laser Acupuncture and Innovative Laser Medicine*; Bahr, F., Litscher, G., Eds.; Bahr & Fuechtenbusch: Munich, Germany, 2018; pp. 13–77.
2. Litscher, G. Laser acupuncture and heart rate variability—Scientific considerations. *Medicines* **2018**, *5*, 43. [[CrossRef](#)] [[PubMed](#)]
3. Litscher, D.; Wang, J.; Litscher, G.; Li, G.; Bosch, P.; Van den Noort, M.; Wang, L. Gender differences in laser acupuncture—Results of a crossover study with green and yellow laser at the ear point Shenmen. *Medicines* **2018**, *5*, 24. [[CrossRef](#)] [[PubMed](#)]
4. Litscher, G. Laser acupuncture research: China, Austria, and other countries—Update 2018. *Medicines* **2018**, *5*, 92. [[CrossRef](#)] [[PubMed](#)]
5. Quah-Smith, I.; Williams, M.A.; Lundeberg, T.; Suo, C.; Sachdev, P. Differential brain effects of laser and needle acupuncture at LR8 using functional MRI. *Acupunct Med.* **2013**, *31*, 282–289. [[CrossRef](#)] [[PubMed](#)]



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