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Editorial

Auricular Medicine

Gerhard Litscher

Founding Editor-in-Chief of ICM-OBM, Research Unit for Complementary and Integrative Laser Medicine, Research Unit of Biomedical Engineering in Anesthesia and Intensive Care Medicine, and TCM Research Center Graz, Medical University of Graz, Auenbruggerplatz 29, 8036 Graz, Austria; E-Mail: gerhard.litscher@medunigraz.at

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The treatment by auricular therapy has a long history. Ear acupoint research has been advancing step by step worldwide [1-17]. The introduction of lasers into medicine brought besides the already existing stimulation with needles, electricity, pressure and liquids an additional technique to auricular acupuncture.

The RAC (Reflex Auriculo-Cardiac) represents an important scientific method in the field of auricular medicine. At the TCM Research Center of the Medical University of Graz, new methodological strategies for recording and objectifying the dynamic pulse changes were scientifically investigated and described. With high-resolution imaging of pulsatile surface changes, the RAC can be reproducibly quantified for the first time. One of the methods consists of a combination of an innovative microscope system of the Medical University of Graz, a video software analysis and special image processing programs of the Beijing University of Science and Technology. First test measurements document the realization of the new method approach (Figure 1 and 2).



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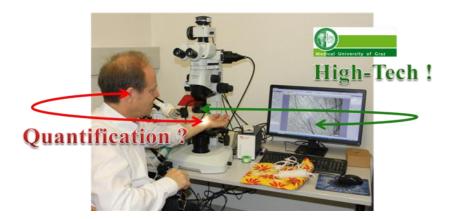


Figure 1 Quantification of the RAC (modified from [7]).



Figure 2 Proof of the dynamic changes in the laboratory using alterations at the surface (modified from [7]).

Sino-European transcontinental basic and clinical high-tech auricular acupuncture studies demonstrate the modernization of auricular acupuncture and the scientific way from auricular therapy to auricular medicine (Figure 3).

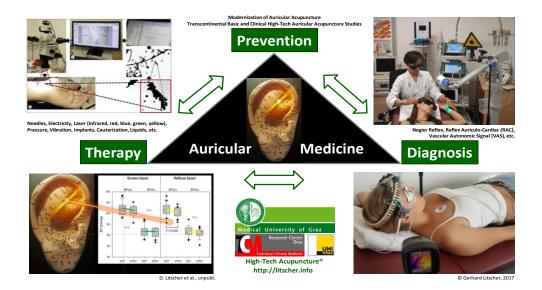


Figure 3 Modernization of auricular acupuncture and the scientific way from auricular therapy to auricular medicine

Auricular medicine has come of age and has gained the attention of the wider medical community in recent years.

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References

- 1. Litscher D, Litscher G. The History of Liquid Ear Acupuncture and the Current Scientific State of the Art. Journal of Pharmacopuncture. 2016;19:109-113.
- Gao XY, Litscher G, Liu K, Bing Z. Sino-European Transcontinental Basic and Clinical High Tech Acupuncture Studies—Part 3: Violet Laser Stimulation in Anesthetized Rats. Evidence-Based Complementray and Alternative Medicine, 2012; 2012:817378.
- Gao XY, Liu K, Zhu B, Litscher G. Sino-European transcontinental basic and clinical hightech acupuncture studies-part 1: auricular acupuncture increases heart rate variability in anesthetized rats. Evidence-Based Complementray and Alternative Medicine,2012;2012:817378.
- 4. Gao XY, Wang L, Ingrid G, Yvonne M, Zhu B, Gerhard L. Brain-Modulated Effects of Auricular Acupressure on the Regulation of Autonomic Function in Healthy Volunteers. Evidence-Based Complementray and Alternative Medicine, 2011;2012:714391.
- 5. He W, Rong PJ, Li L, Hui B, Zhu B, Litscher G. Auricular Acupuncture May Suppress Epileptic Seizures via Activating the Parasympathetic Nervous System: A Hypothesis Based on Innovative Methods. Evidence-Based Complementray and Alternative Medicine, 2012;2012:615476.
- 6. Litscher G. Computer-based quantification of traditional Chinese-, ear- and Korean hand acupuncture: Needle-induced changes of regional cerebral blood flow velocity. Neurological Research. 2002;24:377-380.
- Litscher G, Bahr F, Litscher D, Min LQ, Rong PJ. A New Method in Auricular Medicine for the Investigation of the Nogier Reflex. Integrative Medicine International. 2014;1:205-210.
- Litscher G, Bauernfeind G, Gao X, Mueller-Putz G, Wang L, Anderle W, et al. Battlefield Acupuncture and Near-Infrared Spectroscopy–Miniaturized Computer-TriggeredElectrical Stimulation of Battlefield Ear Acupuncture Points and 50-Channel Near-Infrared Spectroscopic Mapping. Medical Acupuncture. 2011;23:263-270.
- 9. Litscher G, Rong PJ. Auricular Acupuncture. Evidence-based complementary and alternative medicine : eCAM. 2016;2016:4231260.
- 10. Navrotsky LG, Blokhin AA, Belavskaya SV, Lisitsyna LI, Lyutkevich AA, Poteryaeva EL, et al. Patterns of Skin Luminescence Resulting from the Visualization of Active Acupuncture Points Using Optical Stimulation. Integrative Medicine International. 2015;2:1-8.
- 11. Niemtzow RC, Litscher G, Burns SM, Helms JM. Battlefield Acupuncture: Update. Medical Acupuncture. 2009;21:43-46.

- 12. Raith W, Litscher G, Müller W, Urlesberger B. Laseracupuncture a possible alternative treatment for agitation and pain in neonates? Paediatric Anaesthesia. 2013;23:205–206.
- 13. Round R, Litscher G, Bahr F. Auricular acupuncture with laser. Evidence-based complementary and alternative medicine : eCAM. 2013;2013:984763.
- Széles JC, Litscher G. Objectivation of cerebral effects with a new continuous electrical auricular stimulation technique for pain management. Neurological Research. 2004;26:797-800.
- 15. Xian S, Litscher G, Wang H, Lu W, Zhao Z, Litscher D, et al. Continuous Auricular Electroacupuncture Can Significantly Improve Heart Rate Variability and Clinical Scores in Patients with Depression: First Results from a Transcontinental Study. Evidence-Based Complementray and Alternative Medicine, 2013;2013:894096.
- 16. Rong PJ, Zhao JJ, Li YQ, Litscher D, Li SY, Gaischek I, et al. Auricular acupuncture and biomedical research—A promising Sino-Austrian research cooperation. Chinese Journal of Integrative Medicine. 2015;21:887.
- Litscher G. Modernization of traditional acupuncture using multimodal computer-based high-tech methods-recent results of blue laser and teleacupuncture from the Medical University of Graz. Journal of Acupuncture & Meridian Studies. 2009;2:202-209.



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