

TRPV1 Responses In The Cerebellum Using Electroacupuncture Treatment For Chronic Pain And Depression Co-Morbidity In A Murine Model

Bernice Lottering¹, Yi-Wen Lin^{1,2}

¹College of Chinese Medicine, Graduate Institute of Acupuncture Science, China Medical University, Taichung, Taiwan

²Chinese Medicine Research Center, China Medical University, Taichung 40402, Taiwan

Depression is a prominent complex psychiatric disorder, usually complicated through expression of co-morbid conditions, with chronic pain being among the most prevalent. This comorbidity is consistently associated with a poor prognosis and has been shown to negatively impact patient outcomes. With a global rise in this condition presenting itself, the importance of discovering long-term, effective and affordable treatments is crucial. Electroacupuncture has demonstrated renowned success in its use for the treatment of pain, and is a widely recognized therapy in clinical practice for the treatment of various psychosomatic disorders, most notably depression. Our study aimed to investigate the effects and mechanisms of Acid-Saline (AS) inducing states of chronic pain and depression co-morbidity in the cerebellar lobules VI, VII and VIII, using the ST36 acupoint as the therapeutic intervention. A SHAM EA group was incorporated as to allow accurate extrapolation of the true effects of EA at ST36. Furthermore, the role of TRPV1 was relatedly explored through the use of TRPV1-/- mice (KO). Behaviour tests of chronic pain and depression were evaluated to make sure of the successful induction of this comorbidity. This evidence was additionally substantiated in the protein levels observed in immunoblotting techniques, and further visibly corroborated through the presentation of immunofluorescence. Conclusively we hypothesized that EA at ST36, via its action on the TRPV1 and related molecular pathways, could attenuate AS induced chronic pain and depression co-morbidity as observed in the cerebellum lobules VI, VII and VIII.

Biography

Bernice Lottering has completed her PhD at the age of 30 years from China Medical University and specialized in studies pertinent to the advance of medical care based on molecular biology in the realm of patient treatment interventions. She is a proficient researcher who excels in the publication aspects of paper writing, having published in reputed journals and facilitating further work in editing and review.

lotteringbernice@gmail.com