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# Transcriptomic Profiling of Adipose Tissue in Obese Women in Response to Acupuncture Catgut Embedding Therapy with Moxibustion

Garcia-Vivas Jessica M., Galaviz-Hernandez Carlos, Fernandez-Retana Jorge, Pedroza-Torres Abraham, Perez-Plasencia Carlos, Lopez-Camarillo Cesar, and Marchat Laurence A.

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## Abstract

**Objective:** Complementary and alternative medicine, such as Traditional Chinese Medicine, represents an efficient therapeutic option for obesity control. It was previously reported that acupuncture catgut embedding therapy (ACET) with moxibustion reduces body weight and reverts insulin resistance in obese women. This study aimed to evidence changes in adipokines and gene expression in adipose tissue that could explain the effects of ACET with moxibustion.

**Design:** Overweight/obese women were treated with ACET with moxibustion or sham acupuncture as control. Peripheral blood samples and fat biopsies were taken before and after intervention. Circulating adipokines (leptin, adiponectin, tumor necrosis factor alpha, and resistin) were quantified by enzyme-linked immunosorbent assay. Gene expression in adipose tissue was determined by cDNA microarray assays and assessed by quantitative reverse transcription real-time polymerase chain reaction.

**Results:** ACET with moxibustion did not modify circulating adipokines levels. However, correlations with anthropometric and biochemical parameters were affected. Interestingly, transcriptional changes in adipose tissue revealed the modulation of genes participating in homeostasis control, lipid metabolism, olfactory transduction, and gamma-aminobutyric acid signaling pathway.

**Conclusions:** The effects of ACET with moxibustion on body weight and insulin resistance were associated with the regulation of biochemical events that are altered in obesity.



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