

MIDDLE EAST OBESITY, BARIATRIC SURGERY AND ENDOCRINOLOGY CONGRESS

June 25-26, 2018 Dubai, UAE

Zyflamend attenuates high fat diet-induced obesity in mice

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Obesity is a growing epidemic in the United States, affecting more than one-third of adults. There is also a growing body of evidence highlighting the contribution of adipose tissue to systemic inflammatory state that play a potent role in obesity-associated metabolic syndrome and cardiovascular diseases. Zyflamend is a poly-herbal supplement derived from the extracts of ten different herbs effectively activates AMPK in vitro in several cell lines. When activated, AMPK is instrumental in inhibiting anabolic pathways that consume ATP, such as lipogenesis and protein synthesis and enhances catabolic pathways that generate ATP, such as fatty acid oxidation. The effects of Zyflamend on adipogenesis remain largely unknown. The objective of this study was to investigate the effects of Zyflamend treatment on adipogenesis and glucose homeostasis. The report shows the decreased adipogenesis of mouse and human adipocytes in vitro. Moreover, mice treated with Zyflamend exhibited improved glycemic control and enhanced insulin signaling in the muscle and adipose tissue compared with control mice. Further, Zyflamend treatment attenuated chronic HFD-induced Endoplasmic Reticulum (ER) stress in adipose and muscle tissues. Together, these studies identify Zyflamend as a potential treatment for obesity and metabolic syndrome and additional investigation into the mechanism(s) of Zyflamend's metabolic actions.

Biography

Mohammed Alquraishi is a dietician in the Kingdom of Saudi Arabia with the passion of promoting body weight-reduction and maintenance through encouraging healthy dietary habits. Currently, Alquraishi is a PhD student at the department of Nutrition, University of Tennessee at Knoxville, USA. Alquraishi is working under the supervision of Dr. Bettaieb to investigate mixture of bioactive compounds, key enzymes, as well as signaling proteins and their contribution to metabolic diseases such as obesity and type-2 diabetes.

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