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Obesity is a growing epidemic in the United States, a ecting more than one-third of adults. ere is also a growing body of evidence highlighting the contribution of adipose tissue to systemic in ammatory state that play a potent role in obesity-associated metabolic syndrome and cardiovascular diseases. Zy amend is a poly-herbal supplement derived from the extracts of ten di erent herbs e ectively 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. e e ects of Zy amend on adipogenesis remain largely unknown. e objective of this study was to investigate the e ects of Zy amend treatment on adipogenesis and glucose homeostasis. e report shows the decreased adipogenesis of mouse and human adipocytes in vitro. Moreover, mice treated with Zy amend exhibited improved glycemic control and enhanced insulin signaling in the muscle and adipose tissue compared with control mice. Further, Zy amend treatment attenuated chronic HFD-induced Endoplasmic Reticulum (ER) stress in adipose and muscle tissues. Together, these studies identify Zy amend as a potential treatment for obesity and metabolic syndrome and additional investigation into the mechanism(s) of Zy amend's metabolic actions.

Biography

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