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# Effect of 8 weeks of Intense Intermittent Exercise with Thyme Extract on the Expression of Apoptosis Indicators Bax and p53 in Liver Tissue and Insulin Resistance in Type 2 Diabetic Rats

Nader. Afravi<sup>1</sup><sup>(b)</sup>, Amirali. Salehi<sup>2\*</sup><sup>(b)</sup>, Hassan. Norinejad<sup>3</sup><sup>(b)</sup>, Hongxiang. Huang<sup>4</sup><sup>(b)</sup>

<sup>1</sup> Ph.D. in Exercise Physiology, Islamic Azad University Science and Research Branch, Tehran, Iran

<sup>2</sup> MSc in High-Performance Sport, Strength and Conditioning, UCAM, Murcia, Spain

<sup>3</sup> Department of Sport Science, Hidaj Branch, Islamic Azad University, Hidaj, Iran

<sup>4</sup> MSc, UCAM Research Center for High Performance Sport, Catholic University of Murcia, Murcia, Spain

\* Corresponding author email address: salehiamirali110@gmail.com

#### Editor Reviewers Karim Chamari Reviewer 1: Yaghob Badriazarin Tunisian Research Laboratory Associate Professor of Sport Sciences, Tabriz University, Tabriz, Iran. "Sports Performance Email: badriazarin@tbzmed.ac.ir Optimization"National Center of Reviewer 2: Seyed Ali Darbani Medicine and Sciences in Sports Assistant Professor, Department of Psychology and Counseling, South Tehran (CNMSS), Tunis, Tunisia Branch, Islamic Azad University, Tehran, Iran. pademil@hotmail.com Email: Ali.darbani@iau.ac.ir

#### 1. Round 1

### 1.1 Reviewer 1

Reviewer:

In the opening paragraph, the sentence "Three major lesions are considered in diabetic hepatopathy..." should briefly explain why hepatopathy specifically is relevant to your intervention. Consider adding a transition that connects liver health to the importance of exercise and herbal supplementation.

In "Thyme extract was administered at a dose of 200 mg/kg," specify if this dosage was based on previous studies or experimental optimization. This will help contextualize the rationale behind the selected dose.

The detailed interval training protocol is helpful, but it might be clearer if a table summarizes the intensity, duration, and rest periods for quick reference.

The use of two-way ANOVA is appropriate, but in the sentence "Statistical analysis of glucose, insulin, and HOMA-IR was performed using SPSS version 22," elaborate on whether any adjustments for multiple comparisons were made to control the familywise error rate.

Expand the discussion of the potential mechanisms by which thyme reduces apoptosis markers. Currently, the role of phenolic compounds is mentioned, but a more detailed pathway analysis would strengthen your argument.

Author revised the manuscript and uploaded the updated document.

#### 1.2 Reviewer 2

Reviewer:

The sentence, "Recent evidence suggests that high-intensity interval training (HIIT) is among the most effective exercise modalities," would benefit from a more specific citation of studies that have shown its physiological effects in diabetic models, ensuring robustness in your scientific claims.

Clarify the research hypothesis in the sentence, "This study aims to report the effects of exhaustive interval training combined with thyme extract." Explicitly state whether you expect a synergistic effect between thyme extract and HIIT.

The description of Wistar rats' characteristics should include why this model was chosen for studying diabetes and how it might relate to human conditions. For instance, are Wistar rats particularly sensitive to STZ-induced diabetes, or do they have metabolic profiles akin to humans?

The discussion on Bax and P53 expression, e.g., "The mean Bax gene expression ratio in the interval training group (0.29)...," would benefit from a graph displaying error bars to visually convey the variability of your data.

The comparison with prior studies, such as "Ahmadi Asl and colleagues (2007) showed...," could be expanded to include a mechanistic explanation of how thyme extract might differ from or complement other herbal treatments studied.

Author revised the manuscript and uploaded the updated document.

#### 2. Revised

Editor's decision after revisions: Accepted. Editor in Chief's decision: Accepted.