

Moreover, Glypho downregulated key “cell cycle”-related genes (as Mki67 and Cdk1).

Conclusions: In essence, our results are innovative on demonstrating that Glypho – in a dose within the regulatory limits – impaired the hepatic inflammation/redox dynamics at the morphological, biochemical and transcriptomic levels.

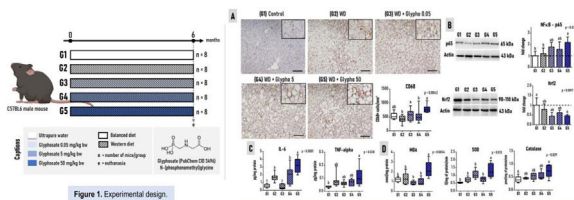


Figure 1. Experimental design.

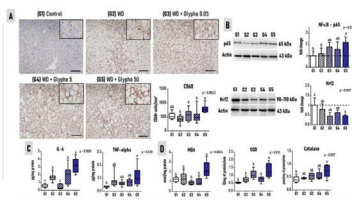


Figure 2. Effects of Glypho on (A) liver histology (hematoxylin-eosin), (B) liver and spleen tissue gene expression, (C) ALT and AST (U/L) and (D) malondialdehyde (MDA), superoxide dismutase (SOD), and catalase in the liver during MAFLD. N = 8 (G1), 8 (G2), 8 (G3), 8 (G4), and 8 (G5) of 12-week-old mice. Different values correspond to statistical difference among groups by one-way ANOVA (linear and log) (Not change) 1.0 = 1.0 (nonsignificant) (not) followed by post hoc Tukey test (p < 0.05).

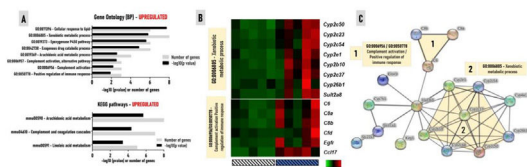


Figure 3. Upregulated genes in the liver of glycolysis-treated animals compared to 100 control (G1). (A) Gene Ontology and KEGG pathway analysis. (B) Heatmap and (C) network analysis of the genes of the most pronounced annotations. Differentially expressed genes (DEGs) were defined considering a value >1.5 and log2 (fold change) > 1.0 = 1.0 (nonsignificant).

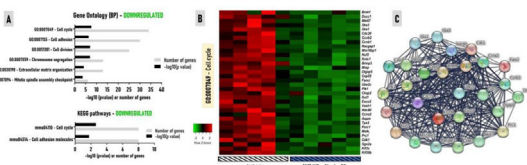


Figure 4. Downregulated genes in the liver of glycolysis-treated animals compared to 100 control (G1). (A) Gene Ontology and KEGG pathway analysis. (B) Heatmap and (C) network analysis of the genes of the most pronounced annotations. Differentially expressed genes (DEGs) were defined considering a value < 0.5 and log2 (fold change) < -1.0 = 1.0 (nonsignificant).

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O-20 EFFECTS OF ISOCALORIC AND NEGATIVE CALORIE BALANCE EXERCISE ON SERUM LEVELS OF INSULIN-LIKE GROWTH FACTOR TYPE 1 IN SUBJECTS WITH INITIAL AND ADVANCED FATTY LIVER

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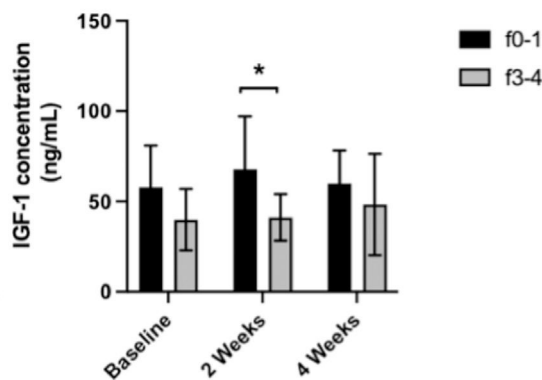
Introduction and Objectives: Insulin-like growth factor 1 (IGF-1) is a hepatokine that has a protective effect on fatty liver. Previous studies in healthy subjects suggest that isocaloric exercise (with neutral caloric balance) would increase serum levels of IGF-1. This study aimed to evaluate the effect of moderate isocaloric exercise (ICBE) and negative caloric balance exercise (NCBE) on serum levels of IGF-1 in subjects with initial and advanced (F3-4) MAFLD (Metabolic Associated Fatty Liver Disease).

Materials and Methods: Prospective trial in postmenopausal women undergoing supervised and standardized exercise at moderate intensity (1 hour, 3 times per week). The study includes subjects

with initial MAFLD (F0-2 Fibroscan <8 kPa) and advanced MAFLD (F3-4, Fibroscan >8 kPa). The protocol consisted of an initial two-week period of ICBE (with nutritional supplement) followed by two weeks of NCBE (without supplement). Using the t-student test for paired samples, the change was analyzed pre vs. post-protocol, and the comparison between groups used the analysis for unpaired samples.

Results: We recruited 27 subjects (20 non-advanced MAFLD and 7 advanced MAFLD). We demonstrated that: (1) Exercise did not significantly increase IGF-1 levels in MAFLD; (2) There was a tendency for subjects with initial MAFLD to have higher IGF-1 levels than subjects with advanced MAFLD before and after exercise, which became significant after 2 weeks of exercise (F0-2 67.9 + 6.4 (ng/mL) versus F3-4 41.2 + 5.3 (ng/mL), p 0.047); and (3) There were no significant differences in IGF-1 levels between ICBE and NCBE (figure 1).

Conclusions: Subjects with advanced MAFLD tend to have lower IGF-1 levels than subjects with initial MAFLD, which becomes significant after 2 weeks of exercise. This suggests that the response to exercise in terms of changes in hepatokines (IGF-1) varies depending on the stage of the disease.



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O-21 NUTRITIONAL SUPPLEMENTATION WITH MEXICAN FOODS, OPUNTIA FICUS INDICA, THEOBROMA CACAO, AND ACHETA DOMESTICUS IMPROVED GUT-LIVER AXIS IN A MAFLD MICE MODEL.

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Introduction and Objectives: Metabolic-associated fatty liver disease (MAFLD) is the most common liver disease worldwide, several studies have shown that gut microbiota had a strong impact in MAFLD developing. This study aimed to evaluate the effect of a supplementation with a mixture of Mexican foods (MexMix): nopal, cacao and cricket on gut-liver axis.