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REPLY TO THE LETTER TO THE EDITOR

Reply to the Letter to the Editor: "Effects of rifaximin in fructose-induced steatohepatitis in rats"

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To the Editor,

We would like to thank the author for their thoughtful comments and interest in our study.[1,2]

Regarding the first point, we fully agree that the absence of fibrosis limits the interpretation of our findings to early-stage disease. Although the absence of fibrosis was acknowledged as a limitation in our original study, we would also note that this early-stage model allowed for a less confounded assessment of rifaximin's anti-inflammatory and antioxidant effects before the onset of established fibrotic changes. This stage may, in fact, represent the most clinically relevant window for therapeutic intervention. Nevertheless, we agree that longer-duration models will be essential to determine whether these effects extend to fibrogenesis, as also highlighted by prior experimental evidence.[3]

Regarding the second point, the rifaximin dosing regimens, once weekly versus three times weekly, were selected to explore whether different administration frequencies could yield differential biological effects within the same experimental framework. Although both regimens demonstrated beneficial effects, no clear superiority of one frequency over the other was observed. This pattern suggests a degree of flexibility in rifaximin's dosing frequency within this model, a finding that, although preliminary, may have practical relevance for future therapeutic protocols. Further pharmacokinetic and dose–response studies are nevertheless warranted to better define the optimal strategy.

We appreciate the author's constructive remarks and agree that future studies incorporating longer experimental durations and refined dosing strategies will be important to further elucidate the therapeutic potential of rifaximin across different stages of MASLD.

Our findings identify the early inflammatory window of fructose-induced steatohepatitis as a tractable target for gut-directed intervention. Given its established safety profile and gut selectivity, rifaximin represents a compelling candidate for further investigation along this axis.

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