Response

Diabetes Metab J 2023;47:882-883
https://doi.org/10.4093/dmj.2023.0355
pISSN 2233-6079 · eISSN 2233-6087

dmj
DIABETES & METABOLISM JOURNAL

Glimepiride Compared to Liraglutide Increases Plasma Levels of miR-206, miR-182-5p, and miR-766-3p in Type 2 Diabetes Mellitus: A Randomized Controlled Trial (*Diabetes Metab J* 2023;47:668-81)

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We appreciate Dr. Lee's insightful comments regarding our recently published article, titled "Glimepiride compared to liraglutide increases plasma levels of miR-206, miR-182-5p, and miR-766-3p in type 2 diabetes mellitus: a randomized controlled trial [1]." The growing body of evidence suggests that microRNAs (miRNAs) play a significant role in the pathogenesis of type 2 diabetes mellitus (T2DM) [2,3]. Nevertheless, only a limited number of studies have explored variations in miRNA expression in response to glucose-lowering drugs [4].

It is crucial to recognize that the miRNAs identified in our study (miR-206, miR-182-5p, and miR-766-3p) have previously been proposed as biomarkers for various diseases apart from T2DM [5-9]. That is why it is essential to notice that the expression of these miRNAs is not solely specific to a particular disease but can also be influenced by medical treatments, such as glimepiride. Thus, investigations about the effect of glucose-lowering drugs on miRNAs' expression are of importance in our understanding of the molecular mechanisms underpinning the actions of these drugs and in shaping personalized treatment strategies.

It is also important to clarify that the aim of our study was not to suggest biomarkers and therefore did not have the design needed to generalize and validate findings outside of our study population [10]. As stated in the conclusion, we see a future need to evaluate miRNAs as potential biomarkers, or biosignatures. In relation to our findings, we see a need for further research to evaluate miR-206, miR-182-5p, and miR-766-3p in the context of diagnosis, prognosis and therapy response of T2DM.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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