

PEER-REVIEW REPORT

Name of journal: *World Journal of Diabetes*

Manuscript NO: 87907

Title: Relationship between GCKR gene rs780094 polymorphism and type 2 diabetes with albuminuria

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05564298

Position: Editorial Board

Academic degree: PhD

Professional title: Full Professor, Research Scientist

Reviewer's Country/Territory: Mexico

Author's Country/Territory: China

Manuscript submission date: 2023-09-01

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-09-13 17:18

Reviewer performed review: 2023-09-14 22:18

Review time: 1 Day and 4 Hours

Scientific quality	☐ Grade A: Excellent ☐ Grade B: Very good ☒ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Novelty of this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No novelty
Creativity or innovation of this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No scientific significance
Language quality	☐ Grade A: Priority publishing ☒ Grade B: Minor language polishing ☐ Grade C: A great deal of language polishing ☐ Grade D: Rejection
Conclusion	☐ Accept (High priority) ☐ Accept (General priority) ☒ Minor revision ☐ Major revision ☐ Rejection
Re-review	☒ Yes ☐ No
Peer-reviewer statements	Peer-Review: ☒ Anonymous ☐ Onymous
	Conflicts-of-Interest: ☐ Yes ☒ No

SPECIFIC COMMENTS TO AUTHORS

Title: The term diabetes mellitus is only accepted to gestational diabetes. The authors must use type 2 diabetes. Abstract: Please use the correct abbreviation for type 2 diabetes (T2D). Please define UACR. If authors quantified urinary albumin, they should use the term albuminuria, not proteinuria (this implicates other detection techniques and other proteins plus albumin). Also, the microalbuminuria is disused. Please use mild, moderate, and severe to classify the albuminuria. In the introduction, it is recommended that the authors explain more and better about GCKR. - Section 2.2: Please double-check abbreviations (Kg, M) to facilitate the reading and define TG, TC, HDL-C, LDL-C, BUN, and SUA. - Sections 2.3 and 2.4: Please explain the methodology aspect of these sections. Results: Please avoid incorrect terms, such as simple type 2 diabetes, which means T2D without albuminuria. The authors quantified UACR; they must use this term, not proteinuria. - The authors forgot to mention the 2-hour postprandial blood glucose in the methodology section. - Please homologate SUA or UA. - Please define urine protein/creatinine or urinary albumin/creatinine. These are different, and they are not clinically the same. - Please homologate HDL or HDL-C; LDL or LDL-C. Discussion

section: Please use ESRD for end-stage renal disease in the manuscript; it was previously defined. Please avoid the term flora and use urobioma to refer to bacteria nonpathogenic in the urinary tract. The information provided by the authors in the second paragraph, Glucokinase (GCK) is... it is general information that could used in the introduction. In this section, the authors must discuss the protein's changes, modifications, and mutations and the causes and consequences at the kidney level. Besides, it must be compared and contrasted with other works or hypothesize about this in the tissue interest. Please define IS previous to contraction or use of the abbreviation. The authors say... "This may be due to the increased expression of GCKR accompanied by insulin resistance, and high insulin levels may stimulate the brush-like edge of the proximal convoluted tubules, promote the exchange of uric acid and sodium ions, increase uric acid reabsorption, and thus increase uric acid levels"... In this part exist multiple concerns. E.g., the subjects analyzed in the present study do not present hyperinsulinemia; thereby, they have no insulin resistance. This can be quickly corroborated whether the authors calculate and include the HOMA calculation. Besides, their assays do not have the scope to ensure or discard the environment in the proximal tubules, and a lot less to know sodium ions behavior in this region. The conceptual asseveration of managing uric acid in tubules is wrong. First, the kidney manages hippurate in the cortex, and the renal medulla is in charge of managing urates (UT and UTA transporters), but not uric acid; this molecular form only exists in urine, and if happens in the kidney, the problem is lithiasis. Therefore, the following assumptions on RAAS, VSMCs, and proteinuria are wrong, too, or at least low supported.

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Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03830173

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor, Doctor

Reviewer's Country/Territory: Croatia

Author's Country/Territory: China

Manuscript submission date: 2023-09-01

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-09-22 20:32

Reviewer performed review: 2023-09-23 21:28

Review time: 1 Day

Scientific quality	☐ Grade A: Excellent ☐ Grade B: Very good ☒ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Novelty of this manuscript	☐ Grade A: Excellent ☐ Grade B: Good ☒ Grade C: Fair ☐ Grade D: No novelty
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Conclusion	☐ Accept (High priority) ☐ Accept (General priority) ☐ Minor revision ☒ Major revision ☐ Rejection
Re-review	☒ Yes ☐ No
Peer-reviewer statements	Peer-Review: ☒ Anonymous ☐ Onymous
	Conflicts-of-Interest: ☐ Yes ☒ No

SPECIFIC COMMENTS TO AUTHORS

Dear Authors in your Manuscript entitled The relationship between GCKR rs780094 gene polymorphism and type 2 diabetes mellitus with proteinuria you investigated the role of rs780094 SNP in the GCKR gene and susceptibility to develop diabetic kidney disease diagnosed as different level of albuminuria/proteinuria. I would suggest to correlate the results according to albuminuria category (A1-A3). In addition, medications (antidiabetic, lipid lowering and antihypertensive) should be presented while they all can alter the albuminuria level. Moreover, it would be better to use the term control group instead of "normal" people.