

<p>Omayma O Abdelaleem, Olfat G. Shaker, Mohamed M. Mohamed, Tarek I. Ahmed, Ahmed F. Elkhateeb, Noha K. Abdelghaffar, Naglaa A. Ahmed, Abeer A. Khalefa, Nada F. Hemeda and Rania H. Mahmoud (2022). Differential Expression of Serum TUG1, LINC00657, miR-9, and miR-106a in Diabetic Patients With and Without Ischemic Stroke. <i>Frontiers in Molecular Biosciences</i>, 8:758742. doi: 10.3389/fmolb.2021.758742</p>	<p>البحث الخامس</p>
<p>مشترك مع آخرين خارج التخصص – منشور</p>	<p>5</p>

Title	<p>Differential Expression of Serum TUG1, LINC00657, miR-9, and miR-106a in Diabetic Patients With and Without Ischemic Stroke.</p>
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ABSTRACT

Background: Ischemic stroke is one of the serious complications of diabetes. Non- coding RNAs are established as promising biomarkers for diabetes and its complications. The present research investigated the expression profiles of serum TUG1, LINC00657, miR-9, and miR-106a in diabetic patients with and without stroke.

Methods: A total of 75 diabetic patients without stroke, 77 patients with stroke, and 71 healthy controls were recruited in the current study. The serum expression levels of TUG1, LINC00657, miR-9, and miR-106a were assessed using quantitative real-time polymerase chain reaction assays.

Results: We observed significant high expression levels of LINC00657 and miR-9 in the serum of diabetic patients without stroke compared to control participants. At the same time, we found marked increases of serum TUG1, LINC00657, and miR-9 and a marked decrease of serum miR-106a in diabetic patients who had stroke relative to those without stroke. Also, we revealed

positive correlations between each of TUG1, LINC00657, and miR-9 and the National Institutes of Health Stroke Scale (NIHSS). However, there was a negative correlation between miR-106a and NIHSS. Finally, we demonstrated a negative correlation between LINC00657 and miR-106a in diabetic patients with stroke.

Conclusion: Serum non-coding RNAs, TUG1, LINC00657, miR-9, and miR-106a displayed potential as novel molecular biomarkers for diabetes complicated with stroke, suggesting that they might be new therapeutic targets for the treatment of diabetic patients with stroke.