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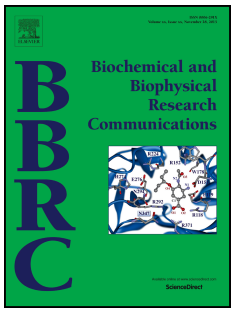

Decreased expression of miR-150, miR146a and miR424 in type 1 diabetic patients: Association with ongoing islet autoimmunity

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Decreased expression of miR-150, miR146a and miR424 in type 1 diabetic patients: association with ongoing islet autoimmunity

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Running Title: Decreased expression of miR-150, miR146a and miR424 in T1D patients

Abstract

Background: Recent studies revealed altered miRNAs profiling in patients with autoimmune diseases, including type 1 diabetes (T1D). Here, we conducted an observational study and examined the expression levels of these five miRNAs（miR-150,miR-146a,miR-424,miR-181a and miR-142-3P）in peripheral blood mononuclear cells (PBMCs) from T1D patients. **Methods:** PBMCs were obtained from T1D cohorts (n=78), type 2 diabetes (T2D, n=46) and healthy control subjects (n=56). Quantitative analysis of five miRNAs were performed using SYBR quantitative real time PCR (qRT-PCR). All values were normalized to endogenous control U6. Then, We compared expression level of five miRNAs in PBMCs from T1DM and age-matched healthy controls, and related the miRNAs expression levels to beta-cell function, autoantibodies and glycaemic control in T1D cohort. **Results:** We identified decreased miR-150, miR-146a and miR-424 in patients with T1D,which can distingulished from non-diabetic patients and T2D patients ($p<0.05$). Furthermore, they were significantly decreased in PBMCs from GADA