

IN VITRO DOWNREGULATION OF THE INCREASED TRAF6 EXPRESSION IN THE MONONUCLEAR CELLS OF PATIENTS WITH SJÖGREN'S SYNDROME BY AN EBV-EBER-SPECIFIC SYNTHETIC SINGLE STRANDED COMPLEMENTER DNA MOLECULE

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Introduction:

We described earlier that the increased expression of miRNA-146 a/b is surprisingly accompanied by an increase in TRAF6 and a decrease in IRAK 1 gene expressions in the mononuclear cells of patients with Sjögren's syndrome.

Methods:

Peripheral mononuclear cells extracted from Sjögren's syndrome patients and healthy controls were treated using poly I:C, EBV-EBER specific DNA, and poly adenylic acid for 24 hours *in vitro*. Then we measured the expression of TRAF6 gene in the peripheral mononuclear cells of patients with Sjögren's syndrome and healthy controls by quantitative reverse transcription polymerase chain reaction.

Results:

In the current study, we present that a.) the increased TRAF6 expression remains almost unchanged tested after two years, b.) the expression levels miR146a and TRAF6 represent a significant negative correlation to each other, c.) however, neither of them shows any association with the values of immunological laboratory parameters, d.) the *in vitro* use of an

EBV-EBER specific synthetic single stranded complementary DNA molecule can result in significant reductions in the expression of TRAF6 in the cells of patients, but not in the healthy controls, whereas the treatments with poly I:C and poly adenylic acid are not able to reduce the TRAF6 over-expression. e.) EBV-EBER specific DNA slightly stimulates the release of interferon α (IFN α) in the cells of Sjögren's syndrome patients..

Conclusion:

These data support the conclusion that the decreasing effect of EBV-EBER specific DNA on the TRAF6 expression may be mediated by a pathway different from the Toll-like receptors in the mononuclear cells of Sjögren's syndrome. However, the possibility of the involvement of some Sjögren's specific EBV-EBER related effects in the increased TRAF6 expression what miR146a is unable to suppress totally, cannot be excluded.