

## عنوان مقاله:

Downregulation of Drosha, Dicer, and DGCR8 mRNAs in Peripheral Blood Mononuclear Cells of Patients with Rheumatoid Arthritis

## محل انتشار:

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## خلاصه مقاله:

Rheumatoid arthritis (RA) is a systemic autoimmune disorder causing irreversible joint damage. MicroRNAs (miRNAs) are post-transcriptional regulators of gene expression that degrade or translate inhibition of mRNAs. miRNAs can be used as therapeutic targets and predictive biomarkers in many disorders. This study was undertaken to investigate whether or not the expression of key elements in miRNA biogenesis, Drosha, DGCR8 and Dicer mRNAs is dysregulated in RA patients. In this case-control study, 50 patients with RA and 50 age- and gender-matched healthy subjects participated. The peripheral blood mononuclear cells (PBMCs) were separated from the whole blood, the total RNA content of the cells was isolated and the first strand cDNA was synthesized. Quantitative analysis was performed through real-time polymerase chain reaction (PCR) using SYBR Green gene expression master mix to detect mRNA level expression of Drosha, DGCR8 and Dicer. The expression levels of Drosha and DGCR8 were significantly downregulated in patients with RA in comparison with the healthy controls ( $P$  value = 0.043,  $P$  value = 0.000365, respectively). The expression level of Dicer was downregulated in RA patients when compared to the healthy controls, although the difference in expression was not significant ( $P$  value = 0.156). RA patients with a familial history of autoimmune rheumatic disease recorded significant overexpression of all three genes. Moreover, DAS28 was significantly correlated with mRNA expression of Drosha, Dicer and DGCR8. The data suggests that downregulated expression of Drosha, DGCR8 and Dicer mRNAs may be contributing to the pathogenesis of RA.

## کلمات کلیدی:

Rheumatoid arthritis, micro RNA, Gene expression, Drosha, Dicer, DGCR8

## لینک ثابت مقاله در پایگاه سیویلیکا:

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