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Poster Presentation

The Roles of Micro RNA in Multiple Sclerosis Disease

Maryam Zareh Rafie[1], Abdolreza Esmaeilzadeh[2*]

[1]Medicine Faculty, Zanjan University of Medical Sciences, Zanjan, Iran

[2]Cancer Gene Therapy Research Center (CGRC), Zanjan University of Medical Sciences, Zanjan, Iran

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Abstract

As one of the most common neurological disabilities in young adults, Multiple sclerosis (MS) has characteristics of inflammation, demyelination, neuro-axonal damage, and progressive prolonged disability. The disease is clinically divided into three general categories according to response to treatment: Relapsing-Remitting MS (RRMS), Primary Progressive MS (PPMS) and Secondary Progressive MS (SPMS). So, focus of clinical researches has been concentrated on some molecular based strategies such as microRNAs (miR). They are small non-coding RNAs with post transcriptional gene expression function that are located inside exosomes, and could play a role in prognosis, assessment of response to treatment or even estimation of aptitude for disease in healthy patients. Hence, it is hoped that they can be used for timely diagnosis, type of the disease determination, and the risk of future illness. Although clinical examination, imaging, CSF laboratory assessment and electrophysiology are measured out for MS dilemma, there are currently no definitive tests for MS evaluation. Serum miRNAs have been identified as powerful biomarkers, not only detect MS patients from healthy controls, but accurately also detect RRMS from progressive forms of the disease. Indeed, the dysregulation of exosomal miRNA in MS patients and their different expression in different subtypes of the disease, has led to their diagnostic features. miR- 370-3P, miR-432-5P were clearly distinguished between the two different groups (RMMS and PPMS clinical subdivisions). miRNAs could greatly improve early detection and determination of disease categories, as well as the conversion of RRMS to SPMS.

Keywords: Capplication, MicroRNA, Multiple Sclerosis

Corresponding Author: Abdolreza Esmaeilzadeh

Email: *a46reza@zums.ac.ir*

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