

25th World Congress on

NEUROLOGY AND NEURODISORDERS

July 16-17, 2018 Melbourne, Australia

Genetic background influences immunity-related genes in two Iranian ethnical multiple sclerosis groupsAbbas Nikravesh¹, Majid Pahlevan Kakhki^{2,3}, Nahid Rakhshi¹, Mahla Abdari¹, Asieh Alikhah³, Ghazal Saffarian¹ and Mehrdad Behmanesh³¹North Khorasan University of Medical Sciences, Iran²Karolinska University Hospital, Sweden³Tarbiat Modares University, Iran

Multiple Sclerosis (MS) remains a poorly-understood autoimmune disease in the Central Nervous System (CNS) with unknown etiology and pathogenesis. Iranian population consisted of different ethnical groups with a specific history and genetic background having different prevalence of MS and responses to drugs. So, to find the role of genetic background on the expression of immunity-related genes, we are trying to evaluate the expression of STAT3, lnc-DC and THRIL in MS patients and healthy controls of two different ethnicities including Sistani population in the south-east and Kurmanj population in the northeast of Iran. To assess the effect of ethnicity on the expression levels of the immunity-related genes, blood samples were obtained from two different cohorts including Sistani and Kurmanj MS patients and their relevant controls. The expressions of the selected genes were assessed by real time PCR method. Surprisingly, in stratification for ethnicity, our results showed that although the expression level of THRIL significantly increased in Kurmanj MS patients ($P=0.03$), this lncRNA down regulated in Sistani patients ($P=0.028$) in comparison with their relative healthy controls. Moreover, lnc-DC did not show any significantly different expression in both Kurmanj ($P=0.33$) and Sistani patients ($P=0.54$). In conclusion, our results showed that besides the role of lncRNAs in the pathogenesis of MS through different mechanism, to be more successful in effective MS therapies based on personalized medicine, genetic background is an important factor which must to be considered.

Biography

Abbas Nikravesh has obtained his PhD from Karolinska Institutet in Stockholm, Sweden in 2008. He is an Assistant Professor in Molecular Genetics in North Khorasan University of Medical Sciences, Bojnurd, Iran. His interested research area is genetics of multiple sclerosis.

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