Title	**LncRNAs, MALAT1 and lnc-DC as potential biomarkers for multiple sclerosis diagnosis.**
Date	**2019**

ABSTRACT

Long non-coding RNAs (lncRNAs) play an important role in gene regulation and show greater tissue specificity and complexity of biological functions. There is on-going research in their contribution in autoimmune diseases like multiple sclerosis (MS). Our study aimed at the evaluation of serum levels of lncRNAs, MALAT1 and lnc-DC in MS patients and the investigation of the association between these lncRNAs and the disease activity. Serum from 45 MS patients and 45 healthy controls was separated. MALAT1 and lnc-DC expression levels were assayed by qRT-PCR. MALAT1 and lnc-DC were significantly increased in MS patients (P=0.004 and P=0.006, respectively) in comparison with controls. There was a significant increase in expression of MALAT1 in secondary progressive MS (SPMS) subgroup compared with controls ($P<0.0001$); however, significant elevation of lnc-DC was demonstrated in relapsing remitting MS (RRMS) subtype (P=0.003) compared with normal controls.

A positive association between the expression levels of MALAT1 and lnc-DC ($r = 0.513$, $P < 0.0001$) in MS patients was detected. Moreover, positive correlation was observed between MALAT1and lnc-DC in RRMS ($r = 0.569$, $P = 0.001$). Serum levels of MALAT1 and lnc-DC may serve as potential novel molecular biomarkers for MS diagnosis and may provide a new direction for its treatment.