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Poster Presentation

The Role of the Long Non-Coding RNA Sequences (LncRNAs) in Neurological Disorders

Milad Ashrafizadeh[1*], Sedighe Abdollahzadeh[2], Vahab Asemani[1]

[1]Department of Basic Science, Veterinary Medicine Faculty, Tabriz University, Tabriz, Iran

[2]Department of Basic Science, Molecular Genetics Faculty, Zahedan University, Zahedan, Iran

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Abstract

Precise interpretation of the transcriptome sequences in the several species showed that the major part of genome has been transcribed; however, just a few amounts of the transcription sequences have open-reading frames which are conversed during the evolution. So, it is unlikely that many of the transcribed sequences code the proteins. Among the all human non-coding transcripts, at least 10000 are approximated to be less 200 nucleotides and are considered as long non-coding RNAs. Overall analysis of the mammalian transcriptome shows that long non-coding RNAs may form the large part of the cellular transcripts. In recent years, there had been an increase in researches for determining the role of lnRNAs at the development and disease. Studies have showed that lncRNAs play an important role in controlling the development of the central nervous system (CNS). Brain development of higher vertebrates is associated to the increase in the levels and complexity of lncRNAs in the developing nervous system. It is known that limited rates of expressed lncRNAs in CNS are important for the neuronal differentiation. Conclusion: LncRNAs contribute in creating neurological disorders by playing a role in mRNA splicing. Advancement in the sequencing technologies and promotion of the useful non-coder elements lead to the rapid detection of the expressed lncRNAs in the vertebrates and invertebrates. Systematic interpretations of the time and spatial pattern of expression in the developing nervous system provide a background for the hypotheses which are related to the lncRNA function.

Keywords: Long Non-Coding Sequence, Neurological Disorders, CNS, Development

Corresponding Author: Milad Ashrafizadeh

E-mail: *dvm.milad73@yahoo.com*

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