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Short communication Article

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Future Studies in the Field of Memory and Cognition Based an Astrocyte

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Abstract

Since the theory of "astrocytes store for memory and cognition" has no contradiction with new and old scientific achievements in terms of memory and cognition, and it is consistent with both the theory of the involvement of talin proteins and the theory of long-term potentiation (LTP) in synapses, it may solve the upcoming deadlocks (problems) if future studies are conducted focusing on astrocytes instead of neurons.

Keywords: Memory, Cognition, Astrocytes, Neuron, Learning, Talin, LTP, Synapses, Genetics, Epigenetics, Storage, Information

1. Introduction

In the last two centuries, almost all studies related to memory and cognition, as the most fundamental unknown constructs of mankind, have been conducted with a focus on considering neurons as the basic brain cells. Examining this field for several years and presenting a new theory in April 2021 entitled "Astrocytes Store for Memory and Cognition", I strongly suggest this theory, which was published in the form of an article in the Journal of International Neuroscience and was also accepted in the 38th World Summit on Neurology, Psychiatry, and Mental Health. It also received positive and extensive attention from international scientific journals and centers as well as prominent scientists.

2. Discussion

It is evident that this theory does not contradict the new and progressive findings in this field, specifically, the theory of the role of talins with their special structural function, and other proteins in shaping learning in synapses, as well as the accompanying biochemical processes for the formation of memory in neurons, which was developed by Dr. Goult from University of Kent and was published at the same time my article was published. This learning, which, in my opinion, takes place via the interaction of astrocytes, can be ultimately stored in astrocytes. Furthermore, the old theories that have been presented based on genetic activities, especially epigenetics, do not have the slightest contradiction with my theory, and after the LTP processes in the synapses, it can ultimately lead to the storage of information and the formation of memory in astrocytes, which is necessary for cognition in any case.

3. Conclusion

To advance the results and scientific achievements and to overcome the problems, it is better to allocate new opportunities to the centrality of astrocytes. In my opinion, the role of neurons is completely clear, and allocating more than a century and spending a great deal of money all over the world are enough to come up with a conclusion in the field of memory and cognition based on the previous perspective [1-5].

Method

My research method is based on content analysis.

Ethical Statement

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

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