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Rosehip Neuron - A Review

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Abstract

Rosehip neuron is a special type of neuron present only in humans. It has inhibitory actions over other cells. It is present in the first layer of the human cerebral cortex. These neurons have an inhibitory action over other neuronal cells. This research is seen as a scoping literature review. In seeking to identify the relevant literature from the past twenty years, we used common databases such as Pubmed, Google scholar online websites. Nearly 30 reference articles are collected related to the topic. The obtained articles were later read thoroughly and understood. Rosehip neurons are unique neurons and can treat neuronal disorders. It can also maintain the activities of other neuronal cells. It is concluded that more research has to be done on the actions of rosehip neurons and about its functions. This review is an attempt to understand the various functions of Rosehip neurons in humans. Further research is needed to know about its full use of humanity.

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INTRODUCTION

A neuron or nerve cell is an electrically excitable cell that communicates with the other cells through a specialised system called the synapses or synaptic knobs. The neuron is the basic working unit of the brain. These are the specialised one which transmits the information to other nerve cells, muscles or glands (Jourquin *et al.*, 2003). The parts of the neuronal cell are the cell body, axon and dendrites. They are the components of the spinal cord and peripheral nerves. There are three different types of neurons, and they are sensory-motor and interneuron. All three types of neurons have different functions. Rosehip neurons are the newly found neuron. They are inhibitory GABAergic neurons present in the first layer of the cerebral cortex. They make up about 10- 15% of all the inhibitory neurons. The name rosehip neuron is because of its appearance. It resembles the rose bushes (Schembri, 2018).

According to previous research, this neuron is not found in mice. The dendrites of this neuron are very compact with many branch points. As it is present only in humans, many of the treatments for brain disorders have failed in humans. The specific action of the rosehip neuron is not quite clear. This neuron appears to be an inhibitory neuron, which regulates the flow of information to certain parts of the brain (Salzer, 1997; Rutherford, 2018).

These neurons have complex dendrites (Nitin and

Vijaykumar, 2018). The main aim of this review is to explore detailed information about rosehip neurons. Many researchers now plan to study how these neurons are organised in these larger circuits and also to explore whether their dysfunction might play a role in neuropsychiatric disease (Berger, 2000). Over the past ten years (Choudhari and Thenmozhi, 2016; Pratha and Thenmozhi, 2016; Nandhini *et al.*, 2018), various researches Subashri and Thenmozhi (2016) were done by our team was on osteology Hafeez and Thenmozhi (2016); Kannan and Thenmozhi (2016); Keerthana and Thenmozhi (2016), stature estimation (Krishna and Babu, 2016), uses and ill effects of electronic gadgets (Sriram *et al.*, 2015; Thejeswar and Thenmozhi, 2015), on RNA Johnson (2020); Sekar *et al.* (2019), animal studies (Seppan *et al.*, 2018) and few in other fields (Menon and Thenmozhi, 2016; Samuel and Thenmozhi, 2015). There is a lack of much information on the current topic, hence the main aim of this study is to explore detailed information about the functions of the Rosehip neuron.

MATERIALS AND METHODS

This research is seen as a scoping literature review. We did not follow a systematic review or meta-analysis. In seeking to identify relevant literature from the past ten years, articles are collected from the Pubmed, google scholar online websites. Nearly 43 articles are found related to the topic. Thirty articles are reviewed for this study.

Articles collected are related to the neurons, neuronal functions, rosehip neurons and its significance. Articles related to other categories are excluded from this study. The obtained articles were later thoroughly read and understood. Quality of articles used was assessed using a quality assessment tool and graded as strong, moderate and weak Table 1.

General Studies on Neuron

Neurons of this type are found using a single nucleus- RNA sequencing. This effects on ageing symptoms. It also has some detoxifying enzymes. Rosehip cells present in the layer of the cerebral cortex have homotypic gap junctions (Morrison and Soto-Avellaneda, 2020). Inhibitory action of rosehip neurons is tested in the invertebrate model organisms. Rosehip neuron is a type of dopaminergic neuron which prevents the neurodegeneration (Brunetti, 2020). Rosehip neuron is a most complex neuron with perplexing features. It is a unique neuron, because it is present only in humans and not in rodents. It has a more significant and complex circuitry (Boldog, 2018). This neuron is the important building block of presynaptic biogenesis. Rosehip neurons have the potential to treat neurological pathogens. It is implicated as a risk factor for neuropsychiatric disorders (Vukoja, 2018). Rosehip neurons can activate a unique set of genes. Further studies have to be done to evaluate the use of animal specimens (Shervin and Frank, 1977; Harnett and Harnett, 2008). Areas within the neurons act like tiny transistors, instead of whole cells like in animals (Shervin and Frank, 1977).

Recent Findings

This neuron makes homotypic gap junctions, and it inhibits the action potentials in microdomains. The dendrites of this neuron are very large and have (Hampson and Deadwyler, 2000) complex computations (Matsuto *et al.*, 1984). FUS is an RNA binding protein which is present in the RNA biosynthetic process is linked to pathogenesis. This neuron plays a role in frontotemporal dementia. In this type of dementia, frontal and temporal lobes start to shrink (Polak and Bloom, 1982). It is found that this neuron also plays a part flight response, impairs cytoprotective mechanisms, activates insulin pathway and the neural stress hormone. It also acts as a switch between the acute flight and long term stress response. Rosehip neuron gives a better treatment for neurological disorders like dementia. It also has an interaction with local alpha and beta. Ciliary genes are required for the hypothalamic accurate neuron development (Krishna and Babu, 2016; Pascoal, 2019; Rosa *et al.*, 2020). It is found that the presynaptic zone is essential for axonal transport. It is assumed that this neuron is homozygous, and it develops from the embryonic stem cell (Boscia, 2016).

Significance

Rosehip neurons are found in the cerebral cortex; these are histochemical cells and are inhibitory in action (Postnova *et al.*, 2010). Rosehip neuronal cells help in treating disorders like Alzheimer's disease and dementia. In case of increased food intake, this neuron causes obesity, and the development of Proopiomelanocortin neurons will lead to hyperphagia, which is the increased adiposity (Postnova *et al.*, 2010; Garcia-Garcia, 2020).

Rosehip neuron is a specific part of the excitatory neuron, which is involved in synaptic membrane fusion. Sometimes mutation occurs in the neurovascular part, which affects the synaptic membrane leads to impairment in neuronal development (Freeman, 2012).

Table 1: Quality of study for articles used in the review

S.No	Author, Year	Type of Study	Key points	Quality
1	(Boldog, 2018)	Review	Mentioned that neuron has a single nucleus RNA sequencing	Strong
2	(Brunetti, 2020)	Review	Discussed the inhibitory action of rosehip neurons.	Moderate
3.	(Pascoal, 2019)	Review	Rosehip neuron is a most complex neuron	Moderate
4	(Vukoja, 2018)	Review	Rosehip neuron is an essential building block for presynaptic biogenesis.	Strong
5	(Shervin and Frank, 1977)	Review	Rosehip neuron is unique to humans and can activate a unique set of genes	Weak
6	(Boldog, 2018)	Review	These type of neurons make homotypic gap junction	Moderate
7	(Pascoal, 2019)	Review	Rosehip neurons inhibit action potentials in microdomains	Moderate
8	(Vukoja, 2018)	Review	These types of neurons have interaction between local alpha and beta neurons.	Moderate
9	(Sekar *et al.*, 2019)	Review	In this neuron, axonal transport occurs in the presynaptic neuron.	Strong
10	(Rutherford, 2018)	Review	Rosehip neurons are found the cerebral cortex and are histochemical cells	Moderate
11	(Schembri, 2018)	Review	Rosehip neurons help treat disorders like Alzheimer's disease	Moderate
12	(Nitin and Vijaykumar, 2018)	Review	This type of neurons has long branches called dendrites and are involved in nature	Strong
13	(Morrison and Soto-Avellaneda, 2020)	Review	Rosehip neuron is a specific part of the excitatory neuron.	Moderate

Continued on next page

Table 1 continued

S.No	Author, Year	Type of Study	Key points	Quality
14	(Rosa *et al.*, 2020)	Review	Cells of this Rosehip neuron are exceptional in treating the disorders and is inhibitory in action	Weak
15	(Johnson, 2020)	Review	This neuron has extraordinary translational potential. They become immature after neurogenesis	Moderate
16	(Yan, 2015)	Review	In Rosehip neuron, neurotrophin acts as a nerve growth factor.	Moderate
17	(Dang *et al.*, 2015)	Review	Rosehip neurons support the neural mechanisms, and it has bold response characteristics.	Strong
18	(Postnova *et al.*, 2010)	Review	Rosehip neuron cells are derived from the bone marrow stem cell. It plays a significant role in sensory neuropathy in patients with diabetes.	Moderate
19	(Innis *et al.*, 1985)	Review	In these types of cells, the effect of neurotrophin promotes both neuronal differentiation. This study was carried out in a culture of chick retinal cells.	Strong
20	(Boscia, 2016)	Review	These types of cells are tolerant against the cerebral ischemia, and sodium exchange occurs in these cells.	Moderate

Rosehip neuron cells have GABAergic inhibitory action potentials, expected to treat the neuronal disorders. As it is a spiral type of cell, its action cannot be observed other than humans. This would be a significant disadvantage.

Controlling Mechanisms

Rosehip neuron has an extraordinary translational potential with the neurotransmitters, which controls some of the actions of other cells (Yan, 2015). There is a disorder called hyperkinetic movement disorder which is caused due to single amino acid deletions in the C- terminal region. This disorder can be treated by rosehip neuron (Sun, 2001). This neuron supports some of the neural mechanisms, but its action is inhibition, and it has bold response characteristics. In some cases, this neuron acts as an inducer like the neurotrophins and plays a role in neuronal exocytosis (Habeck, 2006; Nagy *et al.*, 2004). It also helps in the controlling of sensory neuropathy hampers, bone marrow, stem cells and diabetes. Effects of neurotrophin promote both neuro differentiation and translation. It also controls the opening and closing of sodium-potassium channels and is an excellent tolerant of cerebral ischemia (Wolf, 2009). It also controls the functions of serotonin in the prelimbic cortex.

RESULTS AND DISCUSSION

From the references collected and reviewed, rosehip neurons are the inhibitory neurons found only in humans. It has detoxifying enzymes. More information is given in previous research. This neuron is a complex neuron with perplexing features (Mcconalogue, 1998). It helped in the treatment of neuropsychiatric disorders and mentioned about the neuronal actions. A case study is also done, but the results are not precise.

In general, neurons in any animal cells act as a tiny transistor. Recent studies have given detailed information on the biosynthetic process and about its complexity. Previous research has mentioned the controlling mechanisms of rosehip neurons. It plays a role in the insulin pathway, stress hormone and serotonin (Innis *et al.*, 1985). They also discussed the clinical progression of dementia, findings of genes, stem cells. Rosehip neurons develop from the embryonic stem cells. Clear results are given for the development of rosehip neurons. Rosehip neurons are the important building blocks for presynaptic biogenesis. It can activate a unique set of genes. Rosehip neuron derives from the embryonic stem cell, and the axonal transport is homozygous. It is a specific part of excitatory neurons and is involved in the synaptic membrane fusion. It supports neural mechanisms and has bold response characteristics. Limitations of this study are more extensive and more accurate, an in-depth research is required. Further research is to be carried out about inhibitory actions and benefits of inhibitory action.

CONCLUSION

From this review, it is concluded that all information is expected to help the people to know about Rosehip neurons. Future studies have to be done on neuronal functions and actions of Rosehip neurons. This review is an attempt to understand the various functions of Rosehip neurons in humans. Further research is needed to know about its full use of humanity.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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