

TARGETED PRECURSOR BRAIN STEM CELLS FOR PARKINSON'S DISEASE

Introduction

Parkinson disease is a progressive disease in which cells in one of the movement control centres of the brain begin to not function properly, resulting loss of control over speech, head and body movement. These symptoms are associated with the death of cells in a part of the brain called the substantia nigra, which produces the neurotransmitter dopamine.

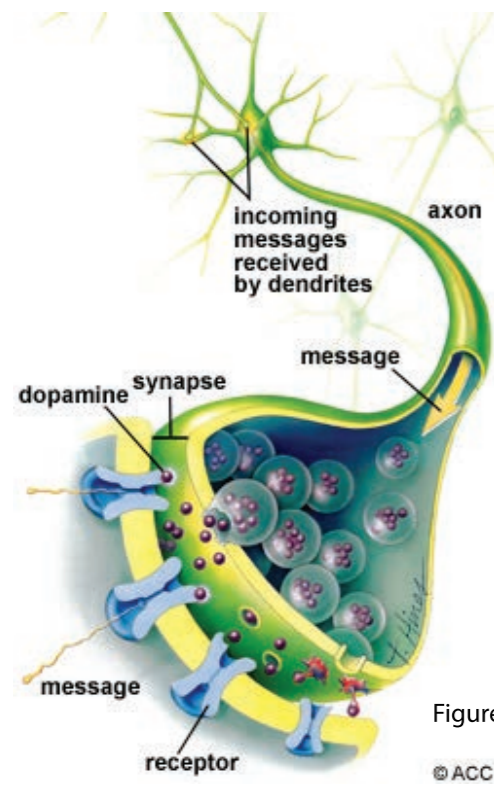


Figure 1. Neurons communicate with each other across a tiny gap called a synapse. Incoming messages from the dendrites are passed to the axon where the nerve cell is stimulated to release neurotransmitters into the synapse. The neighbouring nerve cell receptors pick up these chemical messengers and effectively transmit the message onto the next nerve cell.

REF:
<https://www.mayfieldclinic.com/PE-PD.htm>

Figure 1
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1 Frontal lobe
Associated with personality, behavior, emotions, cognitive, speech: speaking and writing, body motor, concentration and self-awareness

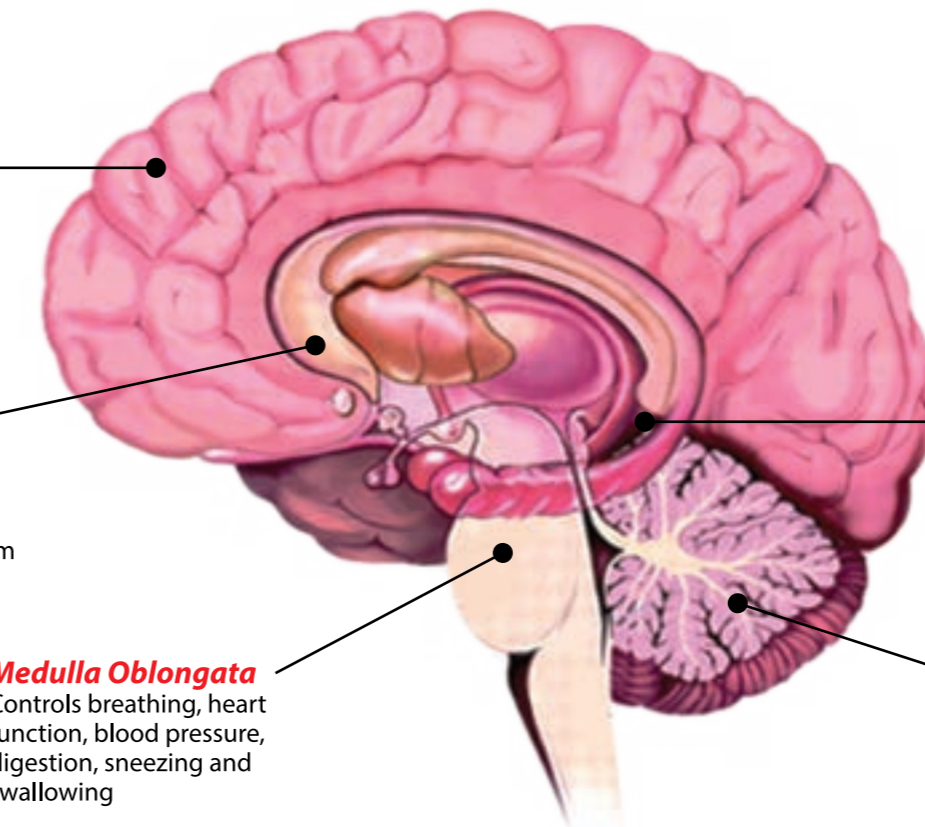
5 Corpus Callosum
The thick band of nerve tissue that connects the left and right hemisphere of the brain and carries information between them

4 Medulla Oblongata
Controls breathing, heart function, blood pressure, digestion, sneezing and swallowing

7 Cerebral Cortex
The thin greyish covering of each cerebral hemisphere. It involves in several functions including motor function, processing sensory information and behavioural reactions

2 Temporal lobe
Recognition of auditory stimuli (auditory processing), memory, understanding language, sequencing and organization

3 Cerebellum
Maintenance of posture, balance and coordination of movement

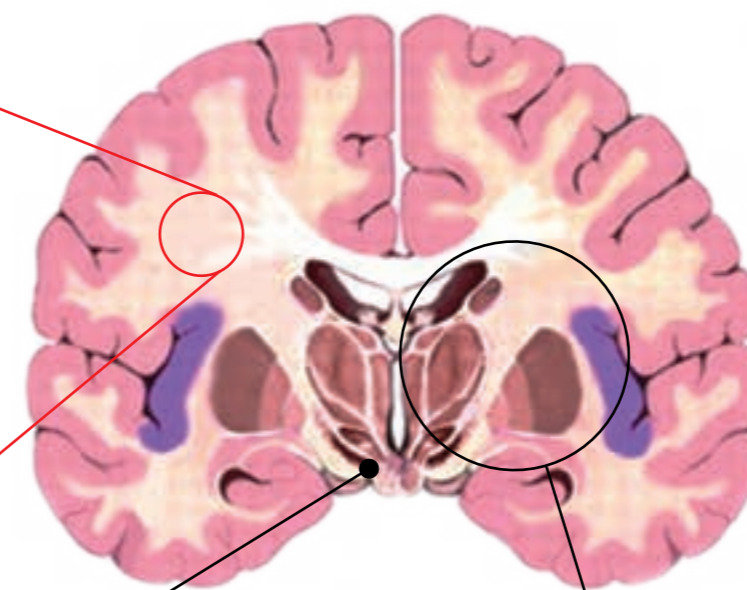
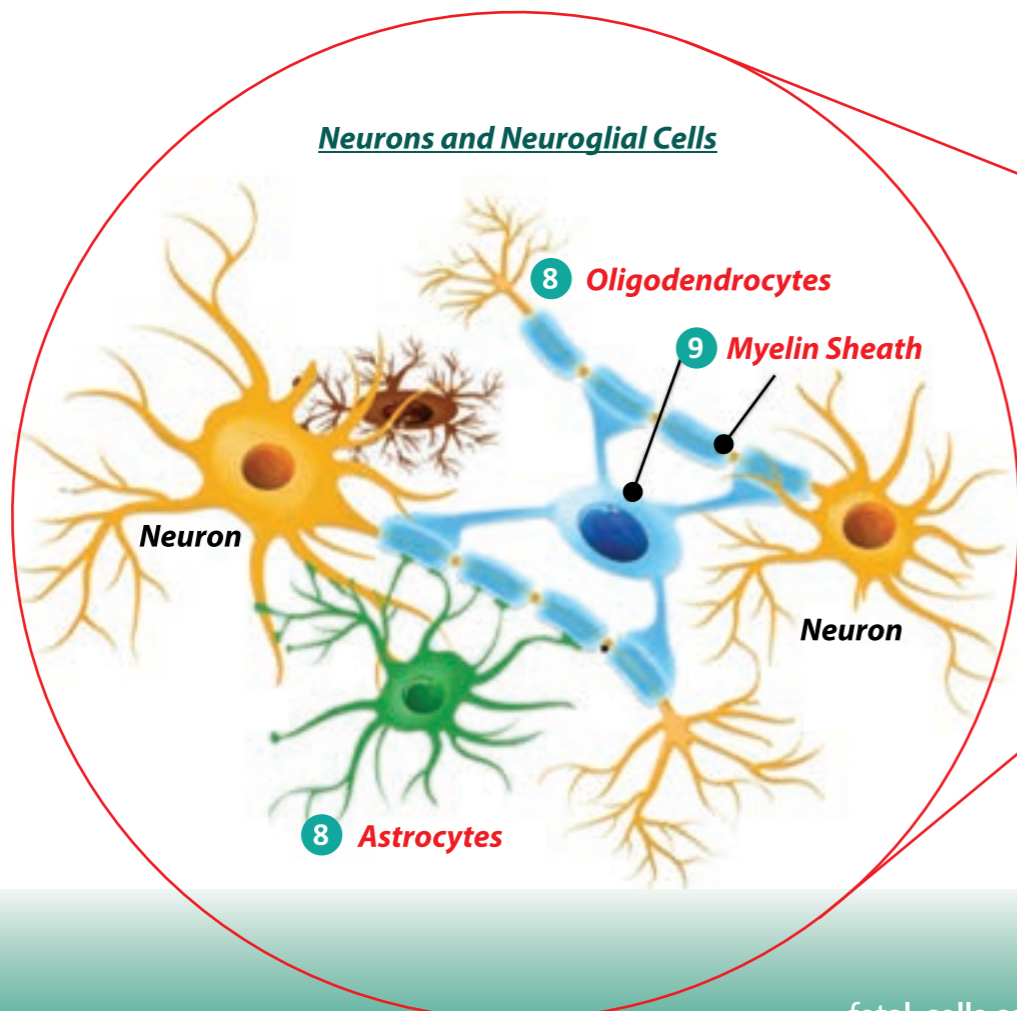


8 Astrocytes & Oligodendrocyte Precursor

Astrocytes is a type of support cells that provides brain cells with nutrients and insulation. Oligodendrocyte manufactures myelin sheaths for axon of brain neurons

9 Myelin producing glial cells peripheral nerves

The main function of myelin is to protect and insulate the axons and enhance their transmission of electrical impulses



7 Substantia nigra
The substantia nigra is a brain structure located in the midbrain that plays an important role in addiction, and movement

6 Basal Ganglia
It works as an integrated brain system to help ensure physical movements are smooth and co-ordinated

The Recommended Targeted Precursor Brain Stem Cells for Parkinson's Disease

- 1 Frontal Lobe
- 2 Temporal Lobe
- 3 Cerebellum
- 4 Medulla Oblongata
- 5 Corpus Callosum
- 6 Basal Ganglia
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