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(54) Title: OLIGODENDROCYTES DERIVED FROM HUMAN EMBRYONIC STEM CELLS FOR REMYELINATION AND TREATMENT OF SPINAL CORD INJURY

(57) Abstract: This invention provides populations of neural cells bearing markers of glial cells, such as oligodendrocytes and their precursors. The populations are generated by differentiating pluripotent stem cells such as human embryonic stem cells under conditions that promote enrichment of cells with the desired phenotype or functional capability. Various combinations of differentiation factors and mitogens can be used to produce cell populations bearing markers of oligodendrocyte precursor cells. Upon further differentiation form complex processes characteristic of mature oligodendrocytes. The cells are capable of forming myelin sheaths, and can be used therapeutically improve function of the central nervous system.