

6th World Conference on
NEUROLOGY AND NEUROSURGERY
&
2nd World Congress on
OBSTETRICS AND GYNECOLOGY

March 27-28, 2019 | Paris, France

Genomics of OLIG family of bHLH transcription factor

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The present study investigated OLIG (Oligodendrocyte lineage gene) induces differentiation of neural progenitors and express oligodendrocyte and putative immature progenitor cells in the adult central nervous system. The murine bHLH transcription factors OLIG1 and OLIG2 are neural progenitors and essential for oligodendrocyte development found to chromosome 21. OLIG1 participate oligodendrogenesis and OLIG2 express in immature neuron and multipotential glia in the embryonic olfactory neurons. OLIG2 a marker of diffuse glioma and faithfully restricted to the normal oligodendroglia in the human brain. In rodents, expression heterogeneity demonstrated OLIG1 and OLIG2 characteristics of various glial tumours. OLIG3 is a third gene of OLIG family detected in the

dorsal neural tube in midbrain, hindbrain, and spinal cord. In this study, we curated literature-derived information of the OLIG family and their specific bHLH domain recorded in genomic data. We accumulate eukaryotic organism genome i.e. Homo sapiens and Mus musculus and performed the comparative and functional analysis. The complete bHLH transcription factor data analysis suggested the number of encoded genes and their domain, motifs, phylogeny, chromosome location and expression. In this study, we performed bioinformatics and computational techniques to the current knowledge of OLIG family of the bHLH transcription factor in eukaryotes.

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