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Title:	Study of factors involved in Chromatin remodeling during Zebrafish retina regeneration
Authors:	C, Nikhil.
Keywords:	Chromatin Zebrafish Regeneration
Issue Date:	28-Jul-2021
Publisher:	IISERM
Abstract:	Chromatin architecture is the structure of the chromatin present inside the nucleus. It is a highly dynamic structure that allows for access to condensed DNA and helps regulate gene expression. There are two ways in which the structure is altered: Non-histone mediated, and Histone mediated. The non-histone mediated factors directly interact with the DNA and uncoil by introducing non-invasive breaks to the DNA. The HMG proteins and the Topoisomerases are such factors. HMGs are transcriptional regulators, while the topoisomerases function as transcriptional facilitators and help in DNA damage control. The Histone mediated pathway involves modifying the histone complexes that lead to variable folding of the chromatin. In general, acetylation unpacks and methylation compacts the structure. Most of the genes that help in development are seen to be highly expressed during proliferation. Drug-induced inhibition of demethylation of histones showed a decrease in proliferating cells. This indicates that changes to the chromatin architecture are imminent for modifications to the cell.
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