

A SIMPLE BRAIN ATLAS OF THE ADULT ZEBRAFISH (DANIO RERIO)

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Abstract

The zebrafish and its brain popularity in scientific research created the necessity of a quick and simple atlas for the examination of the entire central nervous system structure. Sagittal sections of 5 μm were obtained from 10 adult both male and female zebrafish. Luxol Fast Blue-Cresyl Violet staining was performed in serial brain sections from whole adult zebrafish brain for examination of myelin and neuron structure and localization. Neurons can be well established with distinct cell bodies and nuclei in examined cerebral structures from both hemispheres. Cresyl violet is used to stain the neuronal cell bodies and processes which appear in a pink to violet color. Luxol fast blue stain is used to identify myelin in nervous tissue which gets stained in bright blue. The serial brain sections staining with Luxol fast blue-Cresyl Violet gives a quick and complete view of the central nervous system morphology and could be a useful tool in toxicology studies or in the research of neurological and neurodegenerative diseases.

Key words: zebrafish, brain, atlas, Luxol Fast Blue-Cresyl Violet