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P95. HISTOLOGICAL EVALUATION OF (4S)-2-(4-HYDROXY-3-METHOXYPHENYL) THIAZOLIDINE-4-CARBOXYLIC ACID ON ZEBRAFISH (Danio rerio) GILLS

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Investigation the histopathological effects of (4s)-2-(4-hydroxy-3-methoxyphenyl) thiazolidine-4-carboxylic acid on gill tissue of zebrafish were aimed.

(4S)-2-(4-hydroxy-3-methoxyphenyl) thiazolidine-4-carboxylic acid is new synthesized substance which obtained from cysteine and valine. Because of thiazolidine derivates have important biological responses scientist work intensively on these compounds recent years. It is obvious that thiazolidine contained compounds will be used in future in the pharmaceutical industry to treat important diseases.

After one-week adaptation period zebrafish divided into four group (n=10) as one control and 3 experimental groups (0.2 mM, 0.4mM 0.6mM). Gills were dissected after 5 day of the exposure. Tissues were fixed with 10% neutral buffered formalin and dehydration were carried out in an ascending series of ethanol. Tissues were cleared in xylene, embedded in paraffin wax and cut into 5 µm sections on a microtome. The sections were stained with hematoxylin (H&E). Results were evaluated with light microscope.

In control group normal gill histology was observed. In 0.2 mM exposure group, apical fusion, hyperplasia at primary lamellae and degeneration at secondary lamellae were detected. In 0.4 mM exposure group, hyperplasia at both primary and secondary lamellae, fusion at secondary lamellae, hypertrophy at secretory cells and vacuolization at primary lamellae were monitored. In 0.6 mM exposed group, severe vacuolization at secretory cells, hyperplasia at both primary and secondary lamellae, vacuolization at primary lamellae and apical fusion were observed.

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