

P99. HISTOLOGICAL EFFECTS OF (4S)-2-(4-HYDROXY-3-METHOXYPHENYL) THIAZOLIDINE-4-CARBOXYLIC ACID ON ZEBRAFISH (*Danio rerio*) OVARY TISSUE

Nazan Deniz YÖN, Ceyda ÖZTÜRK, Mustafa ZENGİN, Cansu AKBULUT

Sakarya University Science and Letters Faculty Department of Biology, Sakarya, Turkey
Sakarya University Science and Letters Faculty Department of Chemistry, Sakarya, Turkey

Examination the histopathological effects of (4s)-2-(4-hydroxy-3-methoxyphenyl) thiazolidine-4-carboxylic acid on ovary 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.

Zebrafish were raised in a computer-controlled incubation chamber, and received 14 hours of daylight and 10 hours of darkness everyday. After one week adaptation period zebrafish divided into four group (n=10) as one control and experimental groups (0,2mM, 0,4mM, 0,6Mm). For investigating the effects of (4s)-2-(4-hydroxy-3-methoxyphenyl) thiazolidine-4-carboxylic acid , ovary tissues 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. After 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 ovary histology was observed. Primary oocytes, cortical alveolus stage oocytes, vitellogenic oocytes and mature oocytes were monitored clearly. In 0,2mM exposure group, seperation between follicular epithelium and zona radiata was also monitored at cortical alveoli. Opening at structure of oocytes were observed. Openings between zona radiata and vitelline envelope were detected at cortical alveoli. Disintegration of vitelline envelope were monitored at vitellogenic oocyte structure. Vacuolization were observed at cortical alveolus stage oocyte structure. In 0,4mM exposure group, seperation between follicular epithelium and zona radiata was also monitored at mature oocyte. Vacuolization at cortical alveolus stage oocytes were monitored. Seperation between follicular epithelium and zona radiata was monitored at cortical alveoli. In 0,6mM exposure group, openings between zona radiata and vitelline envelope were detected at cortical alveoli. Vacuolization at cortical alveolus stage oocytes were monitored. Degeneration was detected at mature oocyte.

* ceydaoozturkk@gmail.com